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Educational News and Editorial Comment

STATE EMPLOYMENT AGENCIES FOR TEACHERS

The following item taken from the *Alabama School Progress* indicates the development in that state of the state employment agency for teachers:

Of the 275 persons who have enrolled in the Teachers' Placement Bureau to date, 135 have notified the secretary of the bureau of their acceptance of positions for which recommended. Since members have not always been careful to send in this notification, it is altogether probable that the number of placements actually made goes somewhat beyond this figure.

While it is not easy to estimate the value of this service to teachers and boards of education, it is, nevertheless, safe to state that a similar service rendered by commercial agencies would have cost the 135 teachers assisted about $7,000. This estimate is based on the usual commission of 5 per cent of the first year's salary. Since most of the positions filled were either administrative or secondary, the average salary was certainly not less than $1,000.

The organization of the Teachers' Placement Bureau, which was authorized by an act of the 1919 legislature, was undertaken early this year. After making a careful inquiry into the organization and conduct of similar bureaus in the several departments of education of states which have undertaken this type of service and those of higher institutions of learning which maintain appointment committees, a system of records was devised by the secretary of placement, and announcement made that the Bureau was ready to function for teachers and employing authorities.

While Alabama is among the first states of the Union to undertake the work of placement as an organized function of the State Department of Education, the organization and the conduct of the Bureau thus far have demonstrated the wisdom of the legislative act providing for this type of service. For many years the Department of Education had been called upon to assist in securing suitable teachers, and the establishment of a placement division through the legislative act has been the outgrowth of this practice.

Teachers and superintendents are invited to avail themselves of the facilities provided through this agency for mutual help in finding congenial positions and suitable persons for vacant positions.

The practice of dealing through the state department with the matter of employment of teachers has now been taken up by several states. In California it has been taken up by the State Teachers' Association. There is in all of these moves a clear recognition of the fact that this service cannot be left to the commercial agencies.

It is quite as much a matter of public interest to locate teachers as it is to give them their training in normal schools. In these times when there is an inadequate supply of teachers it is of crucial importance to many communities that they get into communication with teachers who are looking for positions without resorting to the relatively clumsy machinery that is involved if they employ a commercial agency. In fact, the commercial agency may be said to exist because there is a lack of attention on the part of state authorities to this essential phase of school organization.

The commercial agencies have in many instances performed services which justify entirely the charges which they make. Once the matter is organized, however, as an official part of the state school system it ought to be possible in other states to show results, as is now being done in Alabama and the few state departments that have undertaken this important function.

SPECIAL SUPERVISORS AND PRINCIPALS

The problem of relating the work of special supervisors to that of the building principal has always been a serious one. Sometimes the supervisor is treated as an assistant superintendent, superior to the principal and in general charge of the teachers in a building. In other cases the supervisor is regarded merely as a special teacher

who comes into the building under the supervision of the principal to conduct classes in a fashion which shall comport with the general plans for the building laid out by the principal. In either of these cases there is always the possibility of some kind of friction because the teachers are not quite clear as to the functions of the special supervisors.

An effort has been made in the new rules adopted by the Board of Education of Atchison, Kansas, to deal with this problem. A great many principals will feel that the situation set up in Atchison by these new rules does not give due regard to the responsibility of a principal for his building. The fact that the rules were passed indicates clearly enough that the members of that school system are fully aware of the difficulties that arise.

It would be of great interest to school officers to know the practices in different cities and to be able to make comparisons between cities where the method is that of the Atchison schools and others where the principal is in a position of superior authority over the supervisor. The full statement of the Atchison rules is as follows, constituting Division V of the By-Laws, Rules, and Regulations of the Board of Education.

SPECIAL SUPERVISORS

Section 1.—The Superintendent may, with the sanction of the Board, secure and place in charge of the various departments such special supervisors as the best interests of the schools demand. Such supervisors shall be employed in the same manner as other teachers, and their salaries fixed by the Board.

RELATION OF SUPERINTENDENTS

Section 2.—The supervisors shall be directly responsible to the Superintendent, and shall seek to execute his policies concerning classroom instruction and the methods employed therein.

Section 3.—Supervisors shall confer with the Superintendent from time to time in order that plans may be formulated, and shall make reports of work done in the schools at least once each half-year. Special reports on work observed or general conditions shall be made on request from the Superintendent.

Section 4.—All reports made by supervisors concerning work of other teachers shall be treated as strictly confidential and may be used by the Superintendent in making his report to the Board of Education.

RELATION TO TEACHERS

Section 5.—Supervisors are vested with authority to correct, suggest or demonstrate to any teacher for the purpose of improving the quality of work.

Section 6.—Supervisors shall use any of the following methods for improving the quality of teaching:

1. Visits: The supervisor shall observe at least three complete lessons each semester in each room. If this is not completed two weeks before the close of the semester it is the duty of the teacher to notify the supervisor in writing of the fact.

2. Conferences: The supervisor shall hold at least three conferences with each teacher in each semester in order to give constructive criticism. If possible these conferences shall be held at the close of the recitation, but the teacher may be asked to come to the office.

3. Teaching: The supervisor may take a class at any time for a lesson, or series of lessons, for the purpose of demonstration, to gain a knowledge of the condition of the class, or for the purely selfish motive of wanting to teach.

4. Lesson plans: The supervisor may ask for lesson plans and have lessons taught for observation whenever special effort is being made to improve the teaching in any certain subject. Teachers asked to plan and teach such lessons shall be notified at least twenty-four hours in advance.

5. Visits of teachers: Supervisors may arrange to have teachers visit each other for purposes of improvement. The object of the visit shall be clearly explained to both teachers beforehand, and if possible the supervisor shall be present and hold a conference with both teachers at the close of the visit.

6. Meetings: Supervisors shall call group meetings to discuss matters of interest to the whole teaching force or any certain group. Teachers are expected to attend and take part in such meetings provided they are duly notified of such.

RELATION TO PRINCIPALS

Section 7.—Principals shall co-operate with the supervisors in their efforts to improve the quality of instruction. They shall report to the supervisors concerning the instruction observed in order that the supervisor may plan the work more intelligently. The supervisor shall report all visits to the principal before leaving the building.

Section 8.—The supervisors shall co-operate with each other in every way possible in order to unify the work of the schools. They shall help carry out the projects of other departments whenever possible.

CORPORAL PUNISHMENT

The following quotations collected by the *Spokane Daily Chronicle* continue the statement about corporal punishment which

was presented in part in the September issue of the *Elementary School Journal:*

Irwin Esmond, deputy commissioner, New York: While the department of education in this state does not ordinarily interfere with the method used by teachers in disciplining pupils, it has never recommended or encouraged the use of corporal punishment and the commissioner of education has on occasions revoked the licenses of teachers for excessive use of corporal punishment.

W. H. Pittman, chief clerk, North Carolina: The supreme court in North Carolina holds that school teachers stand somewhat in *loco parentis* and are clothed with a reasonable authority for correcting the pupils placed under their charge. A moderate degree of corporal punishment can be inflicted without violation of the law, if it be done so as not to inflict permanent injury nor with any malicious or evil purpose on the part of the teacher.

Minnie J. Neilsen, North Dakota: There is very little whipping done in the schools of this state. The teachers and superintendents have the right to do so, but they use it only as the last resort. In my own fifteen years' experience as a teacher, however, I never whipped a pupil and I believe I was considered a good disciplinarian; so I do not feel that corporal punishment is necessary for disciplining.

Vernon M. Riegel, assistant superintendent, Ohio: We have had so little of corporal punishment in the schools of this state in the past several years that the subject has not been discussed and no particular policies relative thereto have been advocated.

J. A. Churchill, Oregon: The majority of Oregon educational leaders are opposed to whipping as a punishment for misdeeds in school. I am fully in accord with the policy of our leaders and do not believe that it is wise, at any time, to resort to corporal punishment for the purpose of maintaining good discipline. My own experience has been that teachers who have the best of discipline never resort to corporal punishment.

C. D. Koch, Pennsylvania: Corporal punishment is allowed by law in this state. In many sections, however, it is very unpopular. A large number of school leaders today are opposed to corporal punishment, but it does not appear wise to remove from the teacher the privilege of using corporal punishment as a last resort.

Walter E. Ranger, Rhode Island: The best educational opinion is against corporal punishment.

J. W. Swearingen, South Carolina: Whipping is reduced to the lowest possible minimum in our schools. Superintendents, principals, and teachers have authority to whip in their discretion. They are held accountable by public opinion for misjudgment or mistakes. They are responsible before the courts for any abuse of their prerogatives. The rod could be banished from every classroom, but this will be impossible so long as the sole appeal to a few bad boys can be made only through their skin.

Fred L. Shaw, South Dakota: I wish to say that as a policy it is practically obsolete. There is no special law governing the administering of corporal punishment in the public schools, but there is a general statute which exempts corporal punishment from the class of assault and battery, and that action cannot be brought against a teacher who exercises corporal punishment in order to preserve the discipline of the school. However, there are practically no cases of corporal punishment occurring in our state today. My own personal opinion is that it is very seldom necessary to punish a pupil in this manner.

Albert Williams, Tennessee: There is no question, however, that the practice of corporal punishment is fast dying out.

Annie Webb Blanton, Texas: In my opinion, when children are small, it is better to administer corporal punishment, if not too severe, than to exclude them from school. I believe, however, that this method of punishment should never be used for pupils of the upper grades of the high school.

G. N. Child, Utah: The general sentiment in the state is against whipping. School policy is also against it. As a result, whipping of pupils in school occurs rarely. On inquiry I am quite sure that there would be but few educators in the state who would favor corporal punishment as the wisest policy in discipline and control.

M. B. Hillegas, Vermont: Personally, I do not believe in corporal punishment as a desirable means for securing proper discipline. The use of force invariably creates a bad situation in the school and to just that extent the teacher's influence is weakened. The successful teacher always leaves with her pupils the thought of reserved power. The teacher who resorts to corporal punishment has disclosed to her pupils the full extent of her ability and her difficulties are likely to be increased rather than diminshed.

Harris Hart, Virginia: My own opinion is that it is not unwise for the general law to permit corporal punishment under proper restrictions, but that the local school regulation should discourage it in every possible way. While I do not believe that whipping should be practiced in the common schools, I would be a little doubtful of the effect if the boys in the schools knew that under no circumstances could they be punished.

M. P. Shawkey, West Virginia: I do not believe much in corporal punishment. However, I do not believe in statutory provisions or any other regulations prohibiting the use of the "hickory and the paddle." We do not have much of this form of punishment in the public schools of our state and there is less of it each year. However, we have a number of cases where such action is taken and which seems to be the best and most effective means of getting good results.

C. P. Cary, Wisconsin: The general trend in the state is to reduce corporal punishment to a minimum, but, in general, it has seemed that forbidding the use of corporal punishment was not altogether desirable.

Katherine A. Morton, Wyoming: We have no law in Wyoming which prohibits corporal punishment of school children. Public sentiment, however,

is against that form of enforcing discipline. The general belief among educators in this state is that a successful teacher does not need to resort to such practices. I hold the same view.

Although only one state carries on its books a law forbidding whipping in the schools, in the twenty-five states that clearly permit the use of the rod, the practice is frowned on by educators.

In the case of many of the twenty-five states that permit corporal punishment there are no laws specifying "corporal punishment" as permissible, but the teacher stands somewhat in *loco parentis* and is clothed with the authority of the parent or guardian to use reasonable punishment in correcting pupils.

A poll of the forty-two states with regard to corporal punishment reveals the following:

Prohibits whipping: New Jersey.

Silent: Maine, Connecticut, Illinois, Delaware, Rhode Island, Wisconsin, Michigan, Louisiana, Tennessee, New Hampshire, New York, New Mexico, Utah, Oregon, and Wyoming.

Permits whipping (by specific provision or court decision): Georgia, Virginia, Maryland, Indiana, Arkansas, Florida, Mississippi, Massachusetts, Pennsylvania, Alabama, Ohio, California, Colorado, Texas, South Carolina, West Virginia, North Carolina, Kentucky, Vermont, Kansas, Iowa, Nebraska, South Dakota, Minnesota, North Dakota.

In states where the state laws permit corporal punishment, opinion against it has become so pronounced in many cities that the municipal authorities have enacted laws forbidding it in the city schools.

IMPROVEMENT OF RURAL SCHOOLS

No outside agency will ever improve the rural school situation unless the communities themselves see the importance of providing better teachers and better equipment for the rural districts. It is fortunate, therefore, that the school people of New York state have succeeded in arousing the interest of the farmers in a type of inquiry which is likely to produce a double effect. Such an inquiry will undoubtedly result in legislation for the improvement of the rural school, but it will also prepare communities to take advantage of this legislation and help themselves in the improvement of conditions.

A full statement of the movement that is under way is taken from the *New York Evening Post:*

NEW YORK'S FARMERS STUDYING SCHOOL

One of the most important educational surveys ever attempted in New York or any other state is just beginning. The survey is to deal with rural

schools, and will be conducted under the direction of the Joint Committee of Twenty-one on Rural Education. The plan, as outlined at a recent meeting of the committee in Syracuse, is "to make a thorough study of all phases of rural education in the state, find out what is now being done in the rural and village schools, what the farm people of the state want in their schools and, as far as possible, decide what kind of schools the country boys and girls should have, and then to take steps to put recommendations for improvement of the schools into effect."

The organization of the Joint Committee on Rural Education came about because of the very general dissatisfaction among farm people with the rural schools and the desire on the part of the State Education Department to have the co-operation of the farmers in improving the educational conditions in the rural communities. "Farmers and educators alike," says the Dairyman's League, "agree that there is opportunity for improvement in rural education. It is agreed that one reason why young people leave the country is the better educational advantages of the city. The problem has been recognized in the past, and efforts have been made to find and agree upon plans for bettering the country schools. Attempts have been made to put plans into effect for improving the schools, but either because these plans were not right or because they were not thoroughly understood they have not succeeded.

"The initiative for this latest movement came from the farmers themselves and from their organizations. After several discussions of the educational problem at Farmers' Week, at Cornell last winter, a suggestion was made that there should be a committee appointed representing both farmers and educators to study the school problem and make suggestions for improvement. The committee on rural education is the result of this suggestion. It is composed of twenty-one members, three of whom were appointed by the New York State Grange, three by the Dairymen's League, three by the State Federation of Farm Bureaus and three by the State Federation of Home Bureaus, making twelve of the twenty-one members direct representatives of farm people. The remainder of the committee is composed of three representatives appointed by the New York State Teachers' Association, three representatives appointed by the New York State Department of Education and three by the Department of Rural Education of the New York State College of Agriculture."

PUBLIC-SCHOOL DEFENSE ASSOCIATION OF SAN FRANCISCO

San Francisco is finally aroused in the matter of its school system. The situation in that city has been for a long time of such a character that the school people of the country have wondered how long it would continue. The school administration of San Francisco has for years been essentially political in its

character and in its motives. Whether or not it has been at the same time corrupt is a matter that can be decided only on examination of the detailed evidences with regard to the operations of this political machinery.

Evidently the Public School Defense Association of San Francisco is of the opinion that corruption has exhibited itself in the administration of the schools. A letter has been addressed to a number of educational authorities of which the following is an extract:

San Francisco needs the help of every American citizen who has the welfare of our public schools at heart.

We are trying to throw off the yoke of autocracy which has been so firmly fastened upon us by local politicians.

You are not asked to subscribe to any statement; all we wish is your judgment based upon the suppositions. It is left to the Association to prove all the inferences.

If you will immediately fill out and return the inclosed questionnaire and possibly find another prominent educator to do the same, you will be performing a deed for which thousands of San Franciscans will thank you.

The questionnaire to which reference is made includes, among other items, the following:

On September 4 His Honor, Mayor James Rolph, Jr., announced on the steps of the City Hall that he would not tolerate politics in the School Department, and in case proof of politics were given to him he would "stamp it out."

The following questionnaire is being sent to several hundred educators hoping by their answers to help define "political" and "professional" as the terms apply to school administrators.

In this inquiry political means that for personal or selfish ends decisions are made which tend to lessen efficiency or professional attitude.

Suppose that teachers are habitually appointed to highly specialized work in a technical school without consultation with the principal and without regard to the service and training of better prepared incumbents.

Is this action political?..... Professional?.....

Suppose a principal is requested to accept equipment which is not up to specifications and only about one-half the value of the contract price.

Is this political?..... Professional?.....

Suppose a principal is urged by the Board of Education to accept Oregon pine furniture when the contract calls for oak and after refusal he is ordered to accept the pine, having also other specifications not fulfilled.

Is this political?..... Professional?.....

Suppose a principal is censured and brought to trial upon charges of suspending pupils without the Board of Education first giving the teachers and the principal a hearing on the specific cases.

Is this political?..... Professional?.....

Suppose a principal is dismissed from the school department for "insubordination" and "evident unfitness for teaching as a principal" when "insubordination" was not mentioned in the charges or at the trial, and when the superintendent at the trial made the forceful statement that the principal "is a fine teacher, an excellent teacher" but "lacked initiative and executive ability."

Is this political?..... Professional?.....

There is little or no machinery provided in our municipal governments for treatment of cases of the sort referred to in this San Francisco inquiry. If the citizens in a given community feel that there are cases of mismanagement in the schools, they are provided with no easy means of securing remedies. Apparently, in most cases, they will have to wait until the situation reaches the point where public opinion is aroused sufficiently to undertake a campaign of the sort represented by this letter. It is a misfortune that there are not some ready means of adjustment.

There ought to be in every state easy access to the state department in appeal from such administration as is described in these hypothetical cases used by the San Francisco committee. The experience of the few states which have opened up this possibility of appeal to the state department has been increasingly satisfactory, especially in cases where the officers of the state department have professional training and are of recognized professional character.

It is to be hoped that the school situation in the great cities of the United States may gradually be brought to an adjustment, and it is a hopeful sign when a community like that of San Francisco reaches the stage where it is no longer willing to tolerate political control of the schools and where it is prepared courageously to raise the question of corruption if such a question needs to be raised.

DETROIT TEACHERS COLLEGE

Detroit has changed the name of its City Normal School to that of Detroit Teachers College. The functions of the new institution have been greatly enlarged and the relation of this

institution to the general supervision of schools has been made much more intimate than it was under the older form of organization.

Mr. S. A. Courtis has been put in charge of the Teachers College and will relate the work of this institution to the general work which he has carried on for a long time of testing the work of the teachers and pupils in the city system.

A full description of the new plan of operation is published in the September issue of the *Detroit Educational Bulletin*. A portion of that statement is as follows:

The activities of Teachers College will be of five marked but related types: (1) supervision and assistance for teachers, principals, supervisors, or administrative officers who are working constructively on school problems; (2) supervision, and training as needed, of probationary teachers (teachers new to the city, cadets, substitutes), and of teachers recommended by principals for further training; (3) training of new teachers; (4) experimentation leading to improved methods of teaching, new courses of study, testing of new plans, new devices, etc.; (5) arrangement and general supervision of institutes, public lectures, etc., of an educational nature. At least a beginning will be made the coming year along all these lines.

For instance, platoon schools and intermediate schools both represent large administrative attempts to adjust the present school organization to a socialized curriculum. Teachers College will gather all that is being done throughout the country along these lines and make it available for the Detroit experiments. It will hold conferences and special classes, and where experiments are carried out under its immediate supervision and direction, will be able to grant credit toward bachelor and higher degrees to those who by their study and creative effort contribute to the educational progress of the city. The amount of constructive work done in Detroit is very great but much of it results in mere local benefit. Teachers College plans to collect and publish from time to time bulletins which will make each item of progress available to all the teachers of the city.

The problem of suitably recognizing exceptional merit and ability in teachers is a difficult one, yet out of a corps of 3,500 teachers, there were 292 who in June were rated by principals as excellent. The new institution is prepared to reward this merit and capitalize it for the city. Upon request from principals, approved by the superintendent, substitutes may be sent to free such teachers for short periods and in small groups for constructive work at the College under supervision on items or lessons of value to all. For instance, the development of a suitable auditorium program for Washington's birthday, a suitable library course for the sixth grade, the management of a school bank on the project basis, are illustrations of the types of contributions which can be made best by the exceptionally able teacher. A slightly different

type of service which Teachers College will render is the special preparation for their new work of teachers who are slated for promotion. The teacher who is to become a first assistant, or an auditorium teacher, or a teacher who enters a special field of work as vocational guidance, can also be sent free for a short period of intensive study both at the College and by observation (under direction) of the work of other teachers.

Progress necessarily implies change and change means readjustment. Some teachers find adjustments of points of view and methods of teaching very difficult to make under the pressure of school work. Many such teachers would be capable of good work if given greater supervision and training for a limited time than they can receive from their principals. A teachers' college means that many such teachers can be given just the assistance they need to save them for the service.

Similarly Teachers College will be of direct and practical benefit to teachers new to the city. Probably the time should never come when all the new positions of the city are filled by graduates of Detroit high schools trained in our city college. Excessive inbreeding is bad. Probably half of the new teachers needed each year come from out of the city. Excellent as these teachers may be, there will always be, nevertheless, many customs and details about work in Detroit which if unknown act as handicaps to successful work. This assistance it will be the duty and privilege of Teachers College to supply. The nature of this work will be much like the supervision of cadets and substitutes during their probationary period and will be handled by the same department.

JUVENILE DELINQUENTS

A statement from *The Churchman* shows an interesting example of progress in the direction of the better treatment of juvenile delinquents. The principle that a child is not to be judged by the criminal laws originally enacted to cover the cases of adults has come to be clearly recognized in many of our states. The adjustments which are permitted in the special courts that have been provided for the treatment of such cases are successful or otherwise in the degree in which the personality of the presiding judge is such as makes him sympathetic and skilful in serving both the interests of society at large and the interests of the individual child.

Evidently society cannot afford to give up its machinery of dealing with young criminals altogether, and this is not the intent of the legislation providing for juvenile courts, but it is equally obvious that the corrective forces of society must be exercised in

this field with unusual skill and tact. The quotation from *The Churchman* is as follows:

Of late years there has been a notable improvement in the method of handling juvenile offenders against the law. It began by a recognition of the fact that to bring children into the sordid atmosphere of the ordinary police court was an unmitigated evil. It placed them in contact with more or less hardened criminals and had a tendency to accentuate any inclination to a career of crime. A remedy was sought in the establishment of children's courts presided over by specially selected magistrates, aided by experienced probation officers. It was a great step forward, but still left something to be desired. An inevitable stigma attached to the formal procedure of an appearance in the juvenile court. If found guilty the best that the offender could hope for was a suspended sentence, and this involved the vigilant supervision of a probation officer whose regular visits to the home advertised the delinquency to the whole neighborhood.

It has been left to Pittsburgh to devise a more perfect and human way of dealing with the problem of youthful offenders against the law. The steel city has established a morals court under the presidency of Mr. Tensard De Wolf, whose prime qualification for the position lies in the fact that he is not a lawyer. The aim of this very informal court is to cure rather than to punish. It recognizes the fact that boys are molded by their environment, and by improving the environment it seeks to improve the boy. Here is a typical case. A boy, smitten with the Wild West fever, has stolen money to buy a gun. "Your hunch was all right, kid," says the judge, "but you took a fool way of getting there. I'm a Wild West man myself, but not your way. I'll show you how to get what you want without raising hell and getting into jail. We'll start something right away."

It is just this kind of human treatment that has won the confidence of the Pittsburgh boys who in their picturesque vernacular declare that this new kind of court is "run by a reg'lar feller dat uses you right," and it accounts for the significant fact that so few return by what is called the "back door," that is through the agency of the police. Judge De Wolf says: "Of the five thousand boys and young men we dealt with the first year, only an insignificant proportion failed to make good, and virtually all of the failures slipped because they were congenitally deficient or because their home surroundings neutralized all that we were able to do for them."

MOVING PICTURES

A number of agencies are very active in calling attention to the importance of moving pictures as devices for instruction in the elementary school. The Bureau of Education has issued a

leaflet in which a summary is given of motion-picture films of educational value which will be furnished to schools by various associations and manufacturing companies. Commissioner Claxton's statement introductory to this leaflet is as follows:

> Many industrial and commercial companies in the United States have in their possession valuable moving-picture films, which they are willing to loan to schools, colleges, universities, chambers of commerce, women's clubs, and other organizations for temporary use, requiring that they shall not be exhibited for profit. In the manuscript transmitted herewith Dr. F. W. Reynolds, of the extension division of the University of Utah, and for several months connected with the Educational Extension Division of the Bureau of Education, has prepared an extensive list of such companies and the films which they offer to lend for such use. It is hardly possible to make such a list complete, and if a complete list were made it would soon be very largely out of date. But this list will be very helpful now, and can be revised from time to time as may seem desirable. Information as to other companies offering similar films for such use and as to other films offered by the companies herein listed will be greatly appreciated.

A single example of the type of film thus supplied is given in the following statement which comes from the Ford Motion-Picture Laboratories:

> The Ford Motion-Picture Laboratory is engaged in the production of an educational film library, to be known as the "Ford Educational Library," that will provide for the public and private schools and colleges of every nation in the civilized world films distinctly for classroom use in the way that will make them of greatest value and easiest to obtain. By placing at the service of every educational institution a product based on the principles of sound pedagogics and edited by leading professors of the universities of the United States and competent authorities in screen instruction in the schools Henry Ford not only will supply school needs but will fulfil the ambitions of the pioneer professors and instructors, until now seriously handicapped in their efforts to secure films designed by teachers for teachers' use in classroom work. On September 1, the first issue of this Library will be available to every school in the United States. The subject will be specially prepared for use in any classroom by members of the scholastic profession who are experts in their particular line, and the units as arranged will be distributed under a plan that will fully meet all conditions in each school, whether the schools be large or small. The Library will further offer to every university and college in the United States facilities for the production by their own professors of films for world-wide school use in any quantities that may be necessary to meet the constantly increasing demand.

NATURE-STUDY

The nature-study movement in the elementary schools of this country is evidently gaining new momentum in a direction very different from that in which it was pending a few years ago, when it was assumed that it would be very easy to introduce natural science into the grades. The earlier period of this general movement may be described as one of enthusiasm, but little content. It was thought that all that was necessary was to interest teachers in the collecting of scientific material for the use of their pupils. The teachers found it very difficult to get suitable material because, in most cases, their own training was not adequate along scientific lines. Furthermore, the new material that was collected by the teachers had to be tried out, and the experiment became a very difficult and tedious one for the teachers, who were occupied at the same time with the other subjects common in the grades. Indeed, the well-established subjects were so much better organized than the new subject that the whole movement suffered from discouragement and gradual eclipse until it promised to become a conspicuous failure rather than the promising innovation that had been hoped for.

The present stage of this movement can be described as one of careful preparation of much productive material by well-trained specialists in science. One of the best illustrations of this sort of thing is to be found in the work of the Department of Rural Education in the State College of Agriculture at Cornell University in the publication of the *Cornell Rural School Leaflet*.

These leaflets contain interesting reading material prepared in a form which makes it possible to put scientific reading directly into the hands of pupils. There are many illustrations which make the leaflets attractive reading and there are copious references which make it possible for the individual teacher to go far beyond the material actually presented.

These leaflets are prepared under a state appropriation which limits their distribution to the state of New York, but teachers who are interested can undoubtedly make arrangements to secure copies. There ought ultimately to be provision for their wider distribution to all parts of the country.

News Items from the School of Education of the University of Chicago

RECENT APPOINTMENTS IN THE COLLEGE OF EDUCATION

Dr. Guy T. Buswell has been given the rank of assistant professor in the Department of Education. Dr. Buswell received his degree from the University of Chicago in June of the current year. Last year he was an assistant professor of Education in Hamline University, St. Paul, Minnesota. He will give courses in educational psychology, experimental education, and methods in the College of Education.

Mr. Karl Holzinger has been appointed as instructor in the Department of Education. In his early academic career he specialized in mathematics. In 1915–16 he was an instructor in mathematics at the University of Kansas and in 1916–17 he held a similar position at the University of Minnesota. During the last two years he has pursued advanced work at the University of Chicago in education and mathematics. He also gave instruction during the last year in the Mathematics Department of the University High School. He will give courses in statistics and public-school accounting in the Department of Education.

Mr. N. B. Henry, who is doing advanced graduate work at the University, has been given the rank of instructor in the Department of Education and will give introductory courses, courses in methods, and a course on school buildings and equipment.

Mr. I. N. Edwards, an instructor in the Department of History of the University of Chicago, will become a member of the Department of Education with the opening of the Spring Quarter and will give courses in the history of modern education, the history of American education, and the constitutional basis of public-school organization and administration. Mr. Edwards is at the present time completing his work for the Doctor's degree. In this connection he is making intensive studies of the legal basis of many current school procedures.

Miss Inez Boyce, who has been in charge of the Department of Home Economics at the Northern Illinois State Normal School, has been appointed as an instructor in home economics in the College of Education. Miss Boyce will give courses in methods and organization of home-economics education. Miss Boyce took her degree in home economics at the University of Wisconsin.

Miss Mary E. Koll, who was for several years an instructor in Home Economics in the Oregon Agricultural College, has been appointed as an instructor in home economics in the College of Education. She will give courses in home management, including household organization and the mechanical care of the house. While at the Oregon Agricultural College she was in charge of the large practice house of the Department of Home Economics. Former students of the College of Education will recall that Miss Koll took her degree in home economics at the University of Chicago in 1915.

Miss Ethel Coe, an instructor in the Chicago Art Institute, will give courses in the Art Department of the College of Education during the Autumn and Winter Quarters of the current year. Miss Coe's courses will take the place, in a measure, of the courses which have usually been given by Professor Sargent, who is on a leave of absence for the year in order to make an intensive study of the commercial uses of design. He is also making a careful investigation of modern art tendencies. Professor Sargent is looking forward to a reorganization of art instruction in public schools which will be more practical and effective than traditional types of training in art.

Mr. Louis Henry Sandhusen, a graduate student in the Department of Education, has been given the rank of instructor in the Art Department.

Mr. Harry T. Fultz, who has charge of the work in industrial education in the University High School, will give courses in the same field in the College of Education during the current year in the absence of Mr. Emery Filbey. Mr. Filbey has secured a leave of absence for the year in order to carry on investigations in the Junior Employment Service of the Federal Department of Labor. In this connection he will inspect the work which is being organized in various parts of the country in the Junior Employment Service.

PROBLEM-SOLVING OR PRACTICE IN THINKING. II[1]

SAMUEL CHESTER PARKER
School of Education, University of Chicago

Synopsis of preceding article.—The preceding article was concerned with "problems of everyday life," and brought out the following points: 1. Such problems vary from very large questions of policy to minute issues requiring only a moment's thought for their solution. 2. Consequently, in school we need many *small* problems as well as *larger* ones. 3. Both *practical* problem-solving and *speculative* problem-solving prevail in daily life. 4. Playful, speculative problem-solving, "just for fun," is a very characteristic human activity and has large social value. 5. The great *variety* of problems found in daily life appears when we try to classify them as mechanical, diplomatic, moral, expressional, aesthetic, scientific, mathematical, etc. 6. Consequently, training in problem-solving may be provided in many subjects in the school. 7. In order to start problems for pupils, we must know what a problem is psychologically and how it originates. 8. For our purposes, a problem may be defined as a *question involving doubt*. 9. Problems originate in something puzzling, perplexing, confusing, disconcerting, unexpected, queer, strange, or "funny." 10. When a pupil's mind is challenged by something of this nature, he has a genuine problem. 11. Both "presented" problems and "discovered" problems abound in daily life. 12. Sometimes everyday problems are solved by an individual working alone, but many are solved by problem-solving group discussions. 13. Hence, practice in the solution of group problems through group discussion trains pupils in a very useful social art. With this social setting of problem-solving in mind we shall turn our attention to a number of actual lessons which will illustrate how training in problem-solving has been organized by progressive teachers.

II. ACTUAL LESSONS ILLUSTRATING PROBLEM-SOLVING IN SCHOOL

A. Seventh Grade: Should the United States Produce Its Own Sugar?

Illustrates results of preceding training in problem-solving.—The first lesson which we shall describe is taken from an upper-grade class in order to illustrate what large issues may be considered reflectively by pupils who are about to graduate from an elementary

[1] This is the second of a series of four articles on this topic.

school in which training in problem-solving is provided from the kindergarten up. After presenting this upper-grade example, we shall describe lessons from the kindergarten and the second and fifth grades, in order to illustrate the gradual progress in the pupils' reflective abilities as they advance through the grades. All the lessons are from the Elementary School of the University of Chicago, but similar instruction may be found in hundreds of progressive schools throughout the country. The seventh-grade geography lesson which we shall present first was taught by Miss Edith Parker.[1]

Relation to preceding lessons. Pupils reviewing various factors in America's progress.—The class was reviewing the geography of the United States, following a previous study of it in the fourth grade some years before. As the University Elementary School completed its work in seven years, the culmination of the geography training was so organized at the end of the seventh grade that it gave the pupils an opportunity to use their geographic knowledge in considering certain large geographic problems of their native country.[2] As this class was studying the country in 1919, shortly after the close of the war, they had been especially impressed with the marvelous achievements of the United States and had become interested in the following large question as the basis of the review: "What are the factors that make the United States such a great nation?" In discussing the matter, they had brought forward a number of geographic factors such as the location and size of the country, its varied topography and natural resources, the character and amount of immigration, etc. For a few days they had concerned themselves with ascertaining the relative achievements of the United States and other countries in crop production. They had studied the cotton and corn crops, and had waxed enthusiastic

[1] To satisfy the curiosity of the reader, I may say that Miss Parker and the author of these articles are not related. Hence it is not inappropriate for me to remark that Miss Parker's technique in conducting problem-solving lessons is a model of artistic teaching of this type. We shall describe some of her fifth-grade geography lessons later in these articles.

[2] For a description of the course in geography in this grade, see the *Elementary School Journal*, XVIII (December, 1917), 271–79. For an article illustrating Miss Edith Parker's general procedure in organizing a large project problem in geography, see her paper entitled "The Partition of Africa—A Seventh-Grade Geography Unit," *Elementary School Journal*, XX (November, 1919), 188–202.

over our production of these staples. They next turned their attention to sugar production, and it was at this stage that the lesson which I shall describe occurred.

Pupils disconcerted by small sugar production. Problem keenly felt.—After some preliminary discussion, Miss Parker raised the chief problem for the day by pointing to a graph which she had drawn on the blackboard. The pupils examined it and found that the United States *produced* in a given year only one-fifteenth of the world's supply of sugar, but *consumed* one-fifth. After their earlier findings of the enormous production of cotton and corn in America, and their general contention that a great nation should try to be self-sufficient in its production of the necessities of life, many of the pupils were nonplused at this revelation of the sugar situation. Many of them were greatly disconcerted, perplexed, and puzzled by this unexpected shock to their enthusiastic national complacency. A psychological problem situation had been skilfully and easily created by the teacher. The current shortage of sugar served to make the problem felt even more intensely.

Problem clearly defined. Proposition to increase production written on the board.—The problem was then clearly presented for solution. "If we produce only one-fifteenth and use one-fifth of the world's supply of sugar, what should we do about it?" Some pupils suggested that we use less; others that we grow more. One pupil finally presented a clear proposition that we produce as much more sugar as possible in order to try to meet our domestic needs. Miss Parker deliberately wrote this on the board and then asked all the pupils to decide if they agreed with it. They all did.

Search for solution. Geographies consulted to determine possibility of raising more.—The question then arose, why, if this was advisable, hadn't the country done it before? In answering this question, attention became centered on the word "possible" in their proposition to produce more, and the teacher asked the pupils how they could find out whether it would be *possible* for us to raise more sugar. The pupils suggested looking up in their geographies the maps and other data showing the areas of possible sugar production and the conditions governing it. They decided to deal with *cane* sugar first.

Pupils suggest conditions; get data from maps; decide greater production is possible.—In reply to Miss Parker's question concerning the conditions which they would have to ascertain, the pupils replied "number of growing days," "suitable soil," and "amount of rainfall." She wrote these items on the board, as she had done with a number of other crucial points in the discussion. Following their suggestion to ascertain the number of growing days needed, she directed the pupils to turn to their geographies where they found a map of the United States with a line showing how far north cane could be grown. They then compared this map with one showing actual cane production, and decided that as far as number of growing days was concerned, much more cane could be grown. Similarly they took up suitable soil conditions and rainfall and arrived at similar conclusions.

Teacher verifies pupils' conclusion by reference to a special treatise.—In order to verify their conclusion, Miss Parker read from a special book on sugar a statement to the effect that there were thousands of acres in the country in which conditions were favorable for raising sugar cane that were not being used for this purpose.

Teacher held discussion to "possibility" before considering "profit."—As all these data were being produced and were gradually bringing out the *possibility* of easily producing more sugar in the United States, one boy kept suggesting that it might not be *profitable* to do so. Miss Parker made a memorandum of his suggestion on the board for later discussion, but suggested that they finish the investigation of the crop possibilities before they took up questions of profit, since the fundamental proposition to which they had all agreed and which was written on the board stated that more should be grown if *possible*. Some difficulty was experienced in getting the boy to give up his idea of considering *profitability* before determining *possibility*.

Pupil's suggestion of lack of profit examined. Uncertainty about original proposition.—However, after the *possibility* had been definitely proved, Miss Parker turned to the issue of profit. The pupils readily saw that what is possible is not necessarily profitable, and began to think that maybe their proposition to which they

had all assented at the beginning, namely, to produce enough sugar to meet our needs, might not be sound. In considering why the South had not raised more sugar cane, since it is quite possible, they suggested two important factors, namely (to use their own language), "competing crops" and "cost of labor." They stated that probably portions of the South found cotton and other crops more satisfactory than cane, and that labor in Cuba was probably cheaper than in the southern states.

Pupil suggested tariff. Teacher left it an open question.—Thus they concluded that the United States did not produce enough sugar to meet its own needs because it could be imported so cheaply that the farmers found it more profitable to raise other crops. The period was almost ended. Hence, in order to relate the day's problem concerning sugar to the larger issue concerning the greatness of the United States and its self-sufficiency in producing the necessities of life, Miss Parker again raised the question of what we should do about the sugar problem. One boy suggested that we place a tariff on sugar. Miss Parker asked, "Who would pay the tariff?" The pupils said, "The people of the United States." "Who are the people of the United States?" she then asked. "We are," they said. She then asked if it seemed wise to make every family in the United States pay more for its sugar by means of a tariff in order that the country might produce enough sugar to meet its own needs. Without waiting for an answer, she concluded the hour by saying, "This is a problem upon which the greatest American statesmen disagree, and to which Congress devotes long discussions."

PRINCIPLES ILLUSTRATED BY SEVENTH-GRADE PROBLEM-SOLVING LESSON

Broad flexible grasp of subject-matter needed by teacher in such lessons.—This type of geography teaching is becoming common in schools where a special departmental teacher is employed to teach the subject in the middle and upper grades. It is obvious that the teacher needs a thorough mastery of the subject-matter of geography if the discussions of the pupils are to be as flexible and broad as in the foregoing lesson. The teacher in such a case has to be familiar not only with such large issues as the question of

protecting native sugar production by means of a tariff but also with such details as the number of growing days required to mature sugar cane.

Broad knowledge anticipates issues and prepares scientific data.—It is important to note, however, that when a teacher is thoroughly informed concerning the problem under discussion, as Miss Parker was in this case, she can anticipate the various issues that will arise, have ready the necessary scientific treatises and references, and guide the discussion so that it follows important scientific lines instead of being sidetracked on minor or irrelevant issues. Thus Miss Parker realized in advance that the pupils would need to use the map showing sugar-cane production, and to save time had a memorandum prepared of the page on which it was to be found. She knew that the pupils would reach certain conclusions that needed verification, and she had on hand a special treatise on sugar and a certain report of the Department of Agriculture, with memoranda of the pages upon which the verifications could be based.

Pupils suggest and evaluate data and procedures.—Yet, with all this definite anticipation, planning, and direction by the teacher, the pupils carried the main burden of solving the problem—they made all the important suggestions and evaluated most of them. Their suggestions included not only matters of fact, such as the necessity of enough growing days and of suitable soil, but also methods of procedure, for example, suggestions that they examine certain maps in their geographies to find certain data. These suggestions of procedure went even farther and included decisions concerning how the question should be subdivided and which phase should be taken up first, etc. For example, early in the hour the question arose whether to consider the possibilities of increased production of *cane* sugar or of *beet* sugar. Miss Parker had the pupils decide which of these should be investigated first. They chose cane sugar and held to it.

Points of technique in problem-solving lesson. Rapid view.—Before turning to other lessons which will further illustrate the special technique to be used by a teacher in guiding problem-solving by pupils, we may note briefly some points of such technique

as is illustrated in this lesson. It is not necessary to study these carefully at this point, as most of them will be illustrated repeatedly in the later lessons and will be summarized in Section IV of the discussion. However, the cumulative effect of frequent reference to them will be helpful. Miss Parker's lesson, then, had the following general characteristics found in the artistic direction of problem-solving discussions.

1. She created an intense problem frame of mind by disconcerting the pupils with a graphic representation of the contrast between our large consumption and relatively small production of sugar.

2. She had the problem for discussion clearly formulated and wrote it on the board.

3. She kept the problem clearly before the pupils by frequent reference to it as written.

4. She encouraged suggestions from the pupils not only in matters of fact or data but also in the matters of procedure, i.e., in regard to such questions as "What shall we do next?" or "How can we find out about that?"

5. She encouraged careful evaluation and criticism by the pupils of the various suggestions.

6. She gave practice in the use of scientific treatises as the source of data and as a means of verification.

7. She encouraged the attitude of desiring verification of suggestions by reference to standard authorities.

8. She conducted the lesson at a deliberate pace, so that pupils were required to think before answering. As a special device in this connection, she occasionally said, "When you have your mind made up, you may rise," and then waited until most of the pupils had risen.

9. She kept the discussion organized along definite lines by outlining on the blackboard the various important suggestions that were made, and then holding to the order in which they had decided to pursue the discussion. In this way the main problem became analyzed into a number of subordinate problems which were disposed of in an orderly manner.

Small subordinate problems that arise give dull pupils a chance.—These subordinate problems included some very large ones and

some small ones. Perhaps the largest that arose was the final one, namely, "Should a tariff be placed on sugar?" This seems almost as large as the original dilemma, namely, "Should the United States produce all the sugar it needs?" Somewhat smaller were these problems: "What factors make it unprofitable to grow more cane?" and "What conditions are necessary to produce sugar cane?" Still smaller were these problems: "How shall we find out how far north sugar cane can be matured?" and "How can we find out what states produce sugar cane?" The breaking up of the large issue into these smaller ones results in the lesson providing training in the solution of both large and small problems. Some of the duller pupils, who might not be able to wrestle with the larger issues involved, might readily suggest looking up a sugar-production map and be able to read from it the data needed.

In the next lesson to be presented, namely, one from the kindergarten, we shall find such small, simple problems presented that even five-year-old children can easily solve them. By reading through the other lessons which are to follow, we can see how children are gradually trained up to the point where they carry on the high-grade type of reflective problem-solving illustrated in Miss Parker's seventh-grade lesson on sugar.

B. Kindergarten Problem: How to Make the Front of Cardboard Store

Contrast old-fashioned dictated constructions with new problem type.—In the kindergarten and primary grades many of the problems which pupils solve concern how to make something. In the old-fashioned kindergartens, it was customary to dictate to pupils just what steps to take in constructing each object. There was little room for reflective thinking by the pupils. In a modern progressive kindergarten, on the other hand, large opportunities are given to pupils to experiment in their constructions, and the experimentation is made of a reflective thoughtful type through class discussions which the teacher organizes. In order to bring out the contrast between the old dictated type of constructive activity and the newer experimental type, we shall present first a lesson from an old kindergarten manual published in London in 1874, and then follow with a modern problem-solving lesson in

making the front of a cardboard store. In the old manual the "fifth gift" is described as consisting of twenty-seven small cubes piled together to make one large cube. Some of the small cubes were further subdivided into triangular prisms. Each child had this material before him and, in the dictated exercises, all performed the same operations as illustrated in the following quotation in which the teacher addresses the children thus:

> "Show me the top three cubes in front. Place them on the back three cubes. What has our large cube become? A flight of steps or a flower stand." Then talk with the child about these objects. "Divide the flower stand into three parts in length—what does it become?" "Three narrow flights of steps." "Place the three together again. I take the middle step away, and place the three cubes upon the top step—what have we now?" etc.

While the pupils may be gaining in motor control and in ability to follow directions in such a lesson as that quoted above, and may even be quite happy in the process, it is obvious that they are not being trained in thinking and are not acquiring much skill in solving construction problems.

Problem lesson: How to make a suitable front for a cardboard store.—In striking contrast with such mechanical dictated activity, we find the following description of a lesson in the kindergarten of the University of Chicago Elementary School in 1918. The problem which engaged the attention of each pupil was the making of a suitable front for a small cardboard grocery store. The teacher was Miss Olive Paine.

Relation to course of study in community life.—According to the course in Community Life, History, and Civics in this elementary school,[1] the children in the kindergarten study the family in its relation to the community. Needs of the family and the community as supplied by grocery stores furnish many problems. The pupils engaged in the lesson to be described were almost ready for the first grade.

Previous work. Trip to a grocery store.—The children had been taken to a grocery store some days before, where they observed the arrangement of the windows, doors, front of the store, shelves inside of the store, articles on the shelves and in the windows, etc.

[1] See the *Elementary School Journal*, XVII (February, 1917), 397–404.

A store of large blocks previously constructed.—A store of some considerable size had been constructed of large blocks and was still standing in the recitation room.

Individual stores started.—The day before the lesson each child had almost completed a small store made from heavy construction paper or from a cardboard box. The new lesson centered in the completion of a suitable front for each store. For this purpose each child had been given a piece of construction paper somewhat larger than the front of his store. Some children had already cut out windows and doors in these sheets.

Problem for the day. Making suitable fronts.—The stores and fronts were brought out. The fronts were to be criticized and remade, if necessary. In short, the problem was the making of *suitable* fronts for the stores.

WORKING OUT OF THE PROBLEM

1. *Criticism of previous work.*—As the teacher handed a child his store and his front, she asked him to place the front in position and see if he thought it was just as he wanted it to be. Sometimes the windows extended out beyond the outside walls of the store. Sometimes the doors and windows were higher than the store.

2. *Children suggest modifications; finding how to fit the fronts.*—One child was asked how his front could have been made to fit the store. He held the sheet of pasteboard in front of the store, and folded it around the side. Miss Paine asked what that was for. The child replied: "You could paste it tight to the store to hold the front on." One child suggested folding the sheet over. The teacher asked how. Various children made suggestions, and they finally concluded the sheet might have been held up in front of the store *before* the windows and door had been cut out. The place at which to fold might have been marked with lines drawn with a pencil. Miss Paine asked how they would have marked *straight* lines. Finally, it was brought out that the sheet might be laid on the floor and folded over in a straight line by placing the edges of the top nicely together. Some of the children who needed new sheets of paper received them.[1] Each child was led to hold

[1] An interesting dilemma arises in deciding *how much* to let children *experiment* in such construction work. On the one hand it might be said that such experimentation

the sheet up in front and mark a place with the pencil; then to lay the sheet on the floor and fold it over at one side; then to hold the sheet up again and find the other side.

3. *Deciding how to make doors and windows; crude idea by one child.*—Then the children were led to see that the doors and windows must come in between the two folds thus made at the side. Some wanted two windows and one door. This time one little girl (the least able of the class, it seemed) cut a very narrow door about twice as high as her store. She was asked why so high a door. She said she wanted it that way. The other children said it was too high. The girl then said it was for an upstairs. The teacher asked if stores and houses had a high door that was for both the lower floor and the upstairs. The child held out that *hers* was all right. Finally the teacher gave her a new sheet and pretty closely directed her work and tried to get the child to see proper proportions for windows, door, etc.[1]

4. *Informal but directed designing and making: what next and how.*—The children worked on the floor in a perfectly informal way. They were led to *see* what the *next* thing was and to *want* to do *that* thing. *How* it could be done was discussed and worked out very skilfully. Some of the children left the part cut out for a window uncut at one end of the window. Some wanted to use this to raise up for an awning, and some wanted it for a shelf under the window. Evidently something of this kind had been done at some

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with its erroneous results is necessary for children of kindergarten age in order to get them to feel the need for the thoughtful planning which prevails in the lesson which we are describing. On the other hand, some educators would favor more direction by the teacher in order to avoid the waste of material incurred in this lesson. In the steel industry, Carnegie would tear down and throw in the scrap heap an expensive plant which had been in use only a short time in order to make way for another which afterthought had shown to be better. How much should kindergarten children be permitted similar waste in solving construction problems? A later article on the nature of problem-solving will throw some light on the dilemma.

[1] Children with low-grade intellects are often unable to *plan* intelligently but can acquire skill in motor arts, e.g., Goddard indicates that a certain type of moron can learn to use machinery and care for animals and needs no supervision for routine work, but cannot plan. It is a waste of time to try to train such pupils to be skilled thinkers, but it is profitable to teach them practical motor arts by careful supervision. For Goddard's convenient table showing some of the possibilities of the feeble-minded see the author's *General Methods of Teaching in Elementary Schools*, p. 304.

other time. The observer doubted if that came out accidentally on the part of so many without having been brought out at a previous lesson. However, it was quite skilfully used by many of the children.

5. *Teacher suggests standards for comparison.*—Miss Paine kept bringing out the idea of size by comparison of the relative heights of doors, windows, shelves, men, women, etc., in the store they had seen and also in the store made of blocks.

6. *Children vary ideas of hinges.*—The number of hinges needed for the door was discussed. One child had just one hinge and seemed happy. She was sent to examine a door to find out how many hinges other doors had. Different children decided that two or three hinges would be best. One boy said four would be best. He wanted that number.

7. *Intercomparison and exchange of judgments by children.*—The children were led to judge of the quality of their own work and to supplement the judgment of others concerning their work and to supplement the judgment of the teacher.

8. *Fast children plan further work.*—Two children were much quicker and showed more ability in motor co-ordination than the rest. They completed their windows and doors and were ready to go on. They were asked what they wanted to do next. They said, "Make a shelf." They were asked what they wanted to make it out of. "Pieces of cardboard." The teacher handed one a piece and asked if that would do. "It is too little," he said. The teacher said they would make the shelves the next day, as the end of the period had arrived.

9. *Articles put away until next day.*—The children were asked to get their stores and fronts ready to put up. "How will you know them?" asked Miss Paine. "Mark letters on them," they said. Then they made their initials on the inside of the stores and the fronts. Quite naturally they gathered up their scraps and put them into the waste basket.

Evaluation of kindergarten problem-solving lesson. Remarks by trained observer.—The foregoing account of the observed lesson, except the paragraph headlines, was written by an experienced teacher of high-school mathematics, Miss Mildred Harris, who

had become interested in problem-solving in general. She was in the process of organizing her ideas of the technique of such teaching while attending a class for supervisors of teaching. Consequently the following comments which she made as a high-school mathematics teacher observing a kindergarten construction lesson are suggestive concerning the general matter of problem-solving.

1. *Definite aims.*—The object of the lesson was clear to both teacher and children and was kept before the minds of the children all the time. Suitable fronts for the stores were to be made. This was the *object* in the *minds of the children.* In the *mind of the teacher*, many purposes were in view. Each thing done was a preparation for the next higher-level thing. Progressive development was aimed at. This was evident in her questions, suggestions, etc.

2. *Self-criticism by pupils.*—Progress was made in the children's criticism of their own work. Each child, as he worked on his own front, was led to judge his own work from time to time as it was completed at that stage. They were led to find out how they could determine if it was just what they wanted it to be. This was one of the parts of the recitation in which the teacher showed skill above the ordinary.

3. *Co-operative suggestion and evaluation.*—The matter of co-operative work, suggestions, etc., was brought out in supplementing criticisms of each other and of the teacher. The teacher worked with the pupils and they worked together and yet each child was busy with his own store front.

4. *Encouraging pupils to make suggestions.*—Independence on the part of pupils was encouraged by such questions as "What would *you* do?" "How might you do *this* time?" "Could you do it this way?" "If that is not just as you want it, *how can you make it* as you *want it to be?*"

5. *Responsibility for planning.*—Each child was led to feel his own responsibility for the making of his front, planning, etc. He was first led to see what he wanted, and then he tried to find out how he could make what he wanted.

6. *Pupils interested.*—The children were interested in their own work. This was shown in the fact that they wanted to go on even after the end of the period.

7. *Teacher anticipated pupils' difficulties.*—A child's probable difficulty was anticipated. The teacher really kept a sharp lookout on each child's work, although she seemed to be leaving the child to do as he pleased. If she saw a child marking a place that would result in the same error he was trying to avoid, she would ask him questions and get him to try to find out if that mark was just right. Sometimes she would ask a child who was about to get into trouble to look at the work of another who was succeeding and see what he thought of that. The child, without any suggestion, often got a clue for his own work and proceeded. If not, the teacher suggested something, etc.

8. *Left a problem for next day.*—The teacher left a problem in the minds of the children to be worked out for the next day—how to make the shelves on which to put the things they wanted in their stores.

NOTE.—In the next article we shall describe sample lessons from the second and fifth grades which will illustrate the practice in thinking that the pupils are given as they progress from the simple construction problems of the primary grades up to the ability demonstrated in the seventh-grade sugar-production lesson with which the present article began.

[*To be continued*]

WHAT IS A PROJECT?

ERNEST HORN
University of Iowa

The data reported in the following paragraphs were obtained through the co-operation of one hundred and twenty advanced students in a course given by the writer at the Univeristy of Chicago in the summer of 1919. The title of the course was "The Improvement of the Study Habits of Grade-and High-School Pupils." The membership of the class was distributed among twenty-four states; and according to the type of position held was made up as follows: high-school teachers, 57; principals, supervisors, and superintendents, 39; junior high school and grammar-grade departmental teachers, 15; college and normal-school instructors, 10; miscellaneous, 9. The sum of these numbers exceeds one hundred and twenty because those who reported two kinds of professional service were scored under each type of work reported. For example, a school superintendent who also taught a subject in a high school was scored both as a superintendent and as a high-school teacher.

A survey of the literature on the "project" had revealed wide differences in the content assigned to the word "project"; but there was, in the writer's mind, a question as to whether such wide differences would be found among teachers and supervisory officials in the field. Because of the wide distribution of the class in geographical location and in type of position held, it seemed that it might be taken as roughly representative of progressive teachers in the field. If so, some indication of the meaning already existing in the minds of progressive teachers and supervisory officials could be obtained by asking the members of the class to write answers to five questions which were framed to bring out certain issues, implied or explicit, in recent discussions of the meaning of project.

After a brief explanation as to the purpose for which the co-operation of the class was sought, the questions were presented orally. Three minutes were allowed for answering the first question and thirty seconds to each of the others. What was wanted was the offhand reaction to each item. The whole procedure was accordingly informal and merely for the purpose of getting the ideas of the class before undertaking a discussion of project instruction. The data thus obtained seemed interesting enough to warrant reporting them to others.

The questions were as follows:

1. Give an example of what seems to you to be a project.
2. Is it essential to a project that the students should use or handle concrete materials? (Handling concrete materials had previously been defined as involving such activities as making a dress, constructing a reinforced concrete bridge, baking a cake, raising a prize calf, etc.)
3. Is it essential that projects should be taken in their life-setting?
4. Is an activity a project if the pupil merely thinks?
5. Would you call listening to a victrola a project?

A summary description of the answers to these questions is as follows:

1. The examples given in answer to the first request may be grouped according to the school subject or type of activity to which they belong. When so grouped the projects given were distributed among the various school subjects in the order which follows: manual training, home economics, agriculture, geography, physics, English, civics, history, chemistry, Latin, printing, mathematics, hygiene, and physical education. The order is not particularly significant beyond the first five subjects. Nearly two-thirds of the examples given were from manual training, home economics, and agriculture.

Eighty-three examples involved the use of concrete materials *in a constructive way;* seventeen involved something beyond mere thinking or book work, but did not involve the use of concrete materials in a constructive way; five involved mere thinking; five involved the making of maps and charts; eight were not

clear; and two were grouped as miscellaneous. No project was given which involved aesthetic experiences such as listening to the victrola.

Grouped according to whether or not a project was to be taken in its life-setting, only six were of a sort that would not be so taken. In other words, the data seemed to indicate that the class had in mind Professor Stevenson's definition of a project, that is, a problematic act taken in its natural setting.

On the whole, the examples given as answers to the first request seemed to indicate that the commonest idea of a project is a problematic act taken in its natural setting and involving something beyond mere thinking; one hundred and five out of one hundred and twenty cases would be so classified; eighty-three of these cases involved such concrete activities as would be necessary in baking a cake, raising a calf, or making a dress. The second most frequently occurring type of example involved a particular purpose taken in its life-setting, but without such manual activities as are characteristic of home economics, manual training, and agriculture. Such a project would be the keeping of an expense account.

2. In answer to the question, "Is it essential to a project that the students should use or handle concrete materials?" the following results were obtained: ninety-two out of one hundred and twenty answered *yes;* sixteen answered *no;* six provisionally *yes;* four provisionally *no;* one answer was neutral; and one student did not answer. Summarizing, ninety-eight answered *yes* with or without reservation; twenty answered *no* with or without reservation.

Of those answering *no* more than two-thirds in complying with a request to give a sample project gave an example which did involve the use of concrete materials in a constructive way. Of ninety-eight answering *yes*, only nine gave examples which did not involve the use of concrete materials; nine answers were not clear.

In so far as this class may be taken as representative, their answers would seem to indicate that the great majority of teachers think of a typical "project" as involving the use of concrete materials, especially in a constructive way.

3. In answer to the question, "Is it essential that projects should be taken in their life-setting?" ninety-four answered *yes* without qualification; seven answered *yes* but qualified their statements; sixteen answered *no* and three did not answer. Apparently the common conception of the requirements for a project, as indicated by the answers to this question and by the examples given, is quite in agreement with those requirements laid down by Professor Stevenson on this point.

4. The question, "Is an activity a project if the pupil merely thinks?" was answered as follows: one hundred and five answered *no;* thirteen answered *yes;* two did not answer. This is in harmony with actual examples of the projects given by the class. It seems to indicate that, in common practice, doing something rather than mere thinking is regarded to be essential to the project teaching.

5. In answer to the question, "Would you call listening to a victrola a project?" the answers were as follows: ninety-eight answered *no* without qualification; three answered *no* but qualified the answer; eight answered *yes* without qualification; and five answered *yes* but with qualifications; six did not answer. Apparently, a very small minority of teachers would call this type of activity a "project." The writer was particularly interested in this fifth question. Listening to a victrola was chosen as a type of aesthetic experience. It does not seem proper to call this type of activity a project or even, for that matter, to say that it involves a "whole-hearted purpose" as defined by Professor Kilpatrick.

It is no part of the purpose of this article to go into an elaborate discussion of the desirability of including under one term (project or any other term) such widely divergent activities as butchering a hog or enjoying a sunset. It would seem rather more profitable to devise means that would insure that such activities be distinguished. Otherwise, those critics who hold that modern schools are ultra-utilitarian will find in such a unified grouping additional justification for their already somewhat warranted belief. Even if we admit, however, that some such unifying term is needed, surely project is not that term. Its accepted connotation renders it unsuited, and even if it were suited to such a use, economy

would forbid an attempt to so use it, since such an attempt would involve, first, forgetting the use to which it is now put by most people; second, learning a new use for it; and third, seeking a new term to apply to those activities which it now describes acceptably. Thus three changes would be necessary where one should suffice.

It would be interesting to know how, in lay usage, the word "project" came to be limited to highly schematic, highly purposeful, and highly pragmatic activities or plans for activities. It would also be interesting to know how it came about that in the teaching profession project, for the great majority of teachers, refers to an activity which is problematic, taken in its natural setting, and involving the use of concrete materials, particularly in a constructive way. The immediate point is that the meaning is commonly so restricted. It is hard to see on what grounds one would justify the attempt to put a different definition before the public.

PROVISION IN THE ELEMENTARY SCHOOL FOR SUPERIOR CHILDREN

FRANK N. FREEMAN
School of Education, University of Chicago

EARLIER PROVISION FOR GIFTED CHILDREN

For many years the graded school has been forced to recognize the fact that an important fraction of the children in the elementary school are not able to do the work which is designed for the average child. As a consequence, provision has been made to give these duller pupils work of the kind or degree of difficulty which is suited to their capacity. In practically all of the larger systems special rooms are provided for such pupils. It was not as early forced upon the attention of teachers and supervisors that there is another group of pupils who are capable of doing more or better work than the average. Observant teachers did, to be sure, notice this fact, but it was first forced upon our attention, in a form which could not fail to be recognized by everybody, as the result of careful tests which were applied to all children alike. Such tests have shown that children vary in their abilities in the same way and by the same degree above the average as below. If it is necessary to make special provision for the children at the lower end of the scale, then, the theory of the distribution of abilities would imply that there is equal need for provision for the children at the upper end of the scale.

A somewhat conservative method of providing for children of different degrees of ability has been in use for a good many years. In 1868, as reported by Theodore S. Henry,[1] the plan of flexible promotion was discussed. According to this plan or similar plans, the entire elementary-school course is divided into small units and promotion is frequent. When a child makes a double promotion

[1] Theodore S. Henry, "Classroom Problems in the Education of Gifted Children," *Nineteenth Year Book of the National Society for the Study of Education, Part II.*

in this system, he does not lose as much subject-matter as he would if he skipped an entire year. On the other hand, if a pupil repeats a section of the work, he is not delayed an entire year in his progress.

Another device which has been in use for some time consists in dividing pupils of a grade into sections and classifying them so that the pupils of the same grade of ability are grouped together.

In recent years, however, many have come to believe that the differences at the upper end of the scale are great enough to require as radical a type of reorganization as has been provided for backward pupils. There have been recently organized, therefore, special classes in which the brightest pupils are put together to receive a more specialized treatment than is given when the grade is merely divided into sections.

With a view to determining roughly how prevalent the practice of organizing such special classes has become, the manner in which such classes are organized, the difficulties which are met with and the methods of overcoming them, and, finally, to obtain an estimate of the result of such organization, a questionnaire was sent during the fall of 1919 to all cities in the United States of 25,000 population or over. The results of the questionnaire are briefly summarized in this article.

After the present inquiry was well under way Henry's report already referred to appeared. In chapter i of this report a description is given of the chief flexible promotion schemes which are in operation; chapter ii gives an account of the special classes which the author had been able to discover up to 1917. He reports fourteen cities in which there are special classes for gifted children and three additional cities where there are mixed rooms which include both dull and bright children.

The large majority of cases which Henry reports consist of preparatory classes after the form of the early classes organized in New York, Worcester, and Baltimore. The purpose of these classes is to give special instruction to the brighter children of the upper grades in order that they may more quickly prepare for high school. The acceleration sometimes consists in doing the work of the upper grades in less time than usual, and sometimes in taking on certain high-school subjects while the pupils are doing

the work of the upper elementary grades. In only three cities were the bright pupils given special work in the intermediate or lower grades.

RESULTS OF THE PRESENT STUDY

The responses to the present questionnaire indicate that the practice of organizing special classes for bright children is growing rapidly. There is some difficulty in interpreting the replies, due to the fact that the term "special classes" is sometimes interpreted to apply to the divisions of the regular grades. It is quite likely that some of the replies which reported the organization of special classes referred merely to this practice. Even allowing for this, however, it is quite certain that there are at present many more than the fourteen cities reported by Henry which make such special provision. If the smaller cities had been included, doubtless many more cases would have been reported.

Interpreting the figures with due caution, it is still significant that out of one hundred and forty who replied fifty-two reported the existence of special classes for bright children; three reported that special classes had been temporarily discontinued, and eight reported that they were being organized. Beside this, twenty-five reported some other plan, such as frequent promotion and the sectioning of a grade according to ability, for caring for the bright children. Only fifty-three reported that no plan was in operation. Approximately half of the questionnaires were answered. While it is probable that most of those who did not reply had no provision to report, it is likely that complete returns would add materially to the number of cases in which special provision is made. In any case, the movement is a very rapidly growing one, and it is desirable that the experience of those who have tried the new form of organization should be made available to others who may be contemplating such a project.

The questions which were sent out are as follows:

1. Are special schools or classes organized in your system to give special opportunity to bright children?

2. *Organization.*—Is the progress of special classes articulated with that of the regular classes or are they independent? How are the special classes or schools articulated with the high school?

3. *Curriculum.*—Is the course of study different in kind? That is, does the special class pursue different work or more work? Does the special class do the same work but in less time? Does the course of study correspond at definite stages to definite stages in the regular classes?

4. *Selection of children.*—Are the children for opportunity classes or schools selected by tests, teacher's judgment, or school marks?

5. *Social adjustment.*—Do difficulties arise in social adjustment of children who advance rapidly? If so, how are they met?

6. *Results.*—How long has the new organization been tried? What is its effect on regular classes?

7. What further developments are planned?

PERIOD AT WHICH SPECIAL PROVISION IS BEGUN

One important question which was not asked concerns the time in the child's school life in which the special class is organized. It has been already remarked that in the early history of the movement the classes were organized chiefly in the grammar grades to give special opportunity for the pupils who were going to high school to save time in the latter part of their elementary course. A good many of the recently organized classes are undoubtedly designed to serve this same class of pupils. In fact, a number of the replies indicate that the organization of the junior high school is believed to serve the same purpose as these special preparatory classes. In the junior high school it is possible, because of the departmental work, to classify pupils in each grade according to their ability and to allow a variation in the amount of work to be taken by the various pupils. Furthermore, the curriculum is ordinarily modified so as to introduce the traditional high-school subjects into the seventh or eighth grade. It seems likely, therefore, that the need which was met by these preparatory classes will in a large measure disappear.

The drift of the replies, however, indicates that it is coming to be widely recognized that provision for bright children needs to be made earlier than the junior high school period. In a number of the special classes which were reported, the classification is made in the fourth and fifth grades, while in a few instances it originates as low as the first grade. Tests of the type of the Binet scale, and group tests of the point-scale type, such, for example, as the army tests, are being rapidly developed and applied to the children all the

way down the grades. The results are indicating that wide differences in ability appear from the first, and call for differentiated treatment. An example of the classification of the pupils from the first grade up may be found in the schools of Nashua, New Hampshire. The pupils are sorted out in the first three grades by the formation of three divisions of each grade. By the fourth grade the group of brightest pupils has been selected by this process, and they are now organized into a rapidly moving group which forms a permanent organization for the rest of the elementary-school course. In Hinsdale, Illinois, the application of the Binet scale was used to classify first-grade children and it was found that children who received the higher scores were able to do much better work than the others. In Council Bluffs, Iowa, the Binet scale again was used to determine the rate of promotion at the first grade, and the results justified the rapid promotion of the younger and brighter pupils.[1]

The following is the list of the cities from which various types of provision for bright children other than special classes were reported:

1. Promotion by subjects:
   Kenosha, Wis.
2. Frequent promotion (half-yearly, quarterly, etc.):

Binghamton, N.Y.	Jersey City, N.J.
Butler, Pa.	Lynchburg, Va.
Chicago, Ill.	New Orleans, La.
Denver, Colo. (special promotion classes)	New Rochelle, N.Y.
	Newton, Mass.
Dubuque, Iowa	St. Louis, Mo.
Elgin, Ill.	Waco, Texas
Harrisburg, Pa.	Washington, D.C.

A variation in this procedure is represented in the special-promotion classes of Denver which are organized for nine weeks at the beginning of the year to prepare pupils for double promotion. Another variation is the practice at Rockford, reported by Henry,

[1] Theodore Saam, "Intelligence Testing as an Aid to Supervision," *Elementary School Journal*, XX (September, 1919), 26–32.

of providing a special teacher to give the brighter pupils of a grade the work of the next grade above at the same time they are doing the work of their own grade.

3. Sectioning each grade according to ability:

Binghamton, N.Y.	Knoxville, Tenn.
Erie, Pa.	Middletown, Conn.
Hazelton, Pa.	Mobile, Ala.
Jamestown, N.Y.	

There is, no doubt, great variation in the method of making this classification. It may be done carefully, thoroughly, and uniformly throughout a school system. On the other hand, it may be done only in the larger buildings where it is necessary to have two or more sections of a grade because of the large number of pupils. The pupils may be selected for the different sections in a careful or systematic way, or only upon the basis of a rough estimate of ability. There may be different numbers of groups ranging from two up to at least five. The larger the number of groups, of course, the more homogeneous may be the ability of the pupils within each group. When it is reported that the pupils of a grade are selected according to ability, therefore, it is often difficult to determine how satisfactory the provision for bright children is.

4. Extra work for bright children:
   Muncie, Ind.
   Lynn, Mass.
5. Special teacher to assist bright pupils:
   Elmira, N.Y.
   Oshkosh, Wis.
6. Special classes for all unusual pupils including bright and dull pupils:
   Oklahoma City.

SPECIAL CLASSES FOR BRIGHT PUPILS

We now come to the analysis of the replies to the questionnaire concerning special classes. The replies are not to be considered as furnishing accurate and detailed statistics regarding the nature or frequency of the various practices mentioned. In many instances the questions were not answered. There is no means of

knowing whether such cases are to be interpreted as positive or negative. The numbers will, therefore, be used only to indicate the trend of practice or of opinion. As such they will be of significance.

It is evident from the answers to the first question that the chief form of organization consists of classes rather than schools. There were reported, however, seven summer schools, which were organized in part or in whole to give the opportunity for bright children to advance beyond the usual rate. The organization of special classes was definitely reported in forty-one cities.[1] While some of these undoubtedly simply represent the division of grades into groups, it is highly probable that there are at present in existence many more special classes than the fourteen reported by Henry.

ARTICULATION WITH REGULAR CLASSES

In answer to the second question it was reported that the progress of the special classes was articulated with that of the regular grade in eighteen cases, that it was independent in eleven cases, and that it was partly articulated and partly independent in three cases. In at least eleven cases, then, the special class is obviously a coherent organization which takes its own pace regardless of the progress of the regular grade. In such cases it is difficult to transfer pupils back and forth between the special class and the regular class. In the majority of cases an attempt is evidently made to retain the possibility of such a transfer. This provision for transfer necessitates an elaborate type of organization and future experience will have to determine which is the better practice.

[1] The following places have either special classes or special schools or both: Little Rock, Ark.; Berkeley, Cal.; Los Angeles, Cal.; San Diego, Cal.; Denver, Colo., Bridgeport, Conn.; Meriden, Conn.; New Haven, Conn.; Atlanta, Ga.; Hinsdale, Ill.; Moline, Ill.; Oak Park, Ill.; Fort Wayne, Ind.; Indianapolis, Ind.; Richmond; Ind.; Sioux City, Iowa; Kansas City, Kan.; Louisville, Ky.; Newport, Ky.; Baltimore, Md.; Everett, Mass.; Haverhill, Mass.; Salem, Mass.; Waltham, Mass.; Worcester, Mass.; Battle Creek, Mich.; Detroit, Mich.; Grand Rapids, Mich.; Muskegon, Mich.; Minneapolis, Minn.; Kansas City, Mo.; Springfield, Mo.; St. Louis, Mo.; Omaha, Neb.; Nashua, N.H.; Montclair, N.J.; East Orange, N.J.; Newark, N.J.; Plainfield, N.J.; Passaic, N.J.; Rochester, N.Y.; Syracuse, N.Y.; Cincinnati, Ohio; Columbus, Ohio; Chester, Pa.; Cranston, R.I.; Houston, Texas; San Antonio, Texas; Salt Lake City, Utah; Richmond, Va.; Everett,Wash.; Spokane, Wash.

The articulation with the high school offers considerable variety of possibilities. In two cases the special work was reported as being a part of the junior high school. The ease of this type of organization has already been commented upon. In five cases it was reported that the work was not articulated. Here apparently the organization is under the direction of the elementary school and the relationship with the high school has not been worked out. It is possible that these replies merely mean that no special attempt has been made to take on high-school work, not that there is any difficulty in pupils going on into the high school. In three cases it was reported that credit is given in the high school for work done in the elementary school, and in six cases that pupils in the elementary school anticipated part of the high-school work. These nine cases evidently represent the preparatory type reported in the earlier experiments. In three cases it was reported that pupils pass from the seventh grade to high school, thus saving one year; and in one case the pupils progress rapidly but enter high school with the regular class, having accomplished the elementary-school work in less than the regular time. There is nothing in the replies to indicate difficulty arising from the organization of special classes in reference to the pupils' high-school work. A considerable number, namely, twenty-five, of the replies, however, either left this question blank or answered in an indefinite manner. This is a problem which either is not given much consideration or offers no difficulty.

THE CURRICULUM: SPEEDING UP OR ENRICHMENT

The first two questions with regard to the curriculum were evidently put somewhat ambiguously and were, therefore, not always clearly answered. The intention was to determine whether the work in the special classes is made different from that of the ordinary classes by adding new material to it, or whether the special classes simply do ordinary work more rapidly than usual. The first question, "Is the course of study different in kind?" was intended to refer to the reorganization in the content of the subject-matter. The replies were as follows: different work, 2; both, 5; more work, 17; no, 9; essentials, 2; varies with need of special

class, 1; left blank, 9. It is probable that the two reporting "different work" and the five reporting "both" indicate an enrichment of the curriculum as contrasted with mere speeding up. However, it is possible that some reporting "more work" meant also an enrichment. Additional light may be thrown upon the interpretation of these replies by the answers to the next question which inquires whether the same work is done in less time. To this the replies were affirmative in a very large majority; thirty-two answered "yes"; one, "no"; and eleven left the question blank. In some cases the speeding-up process is so emphasized that many of the details of the courses are omitted.

This raises one of the central questions in the whole problem. There appears to be some doubt in the minds of those who have written upon the theory of such classes, but the practice seems to have been prevailingly of one type, namely, speeding up the pupils' progress. This speeding-up process has taken two forms. In the first place, it consists in going through the regular curriculum in the same order as is usual but in less time. The second method consists in introducing advanced work earlier in the curriculum and in this way accomplishing the entire course more quickly.

It is undoubtedly desirable that the students who are to do advanced professional work should not linger unnecessarily long upon the earlier stages of their preparation. There has been a vast amount of waste of time and energy through such pupils marking time and repeating work through reviews which were not necessary for them. Some acceleration in the progress is doubtless very desirable.

On the other hand, we should not conclude too readily that mere speeding up or condensation will meet the needs of these pupils in the best manner. There can be little question that it is possible to carry this speeding-up process too far. Experiments with certain special classes have shown, for example, that they can do an ordinary year's work in a half-year. Reasoning from this, it has been predicted that such classes could go through the elementary school in four years. The question has often arisen in the minds of educators whether this is the natural outcome of these experiments and, if so, whether it is desirable.

It may be that an analysis of the type of ability of these bright children will throw more light upon this problem. In a number of cases it has been reported that their superiority is not equal in the various realms of school work. The suggestion has been made a number of times in the replies to this questionnaire that the bright children are not particularly superior in some of the more mechanical aspects of school work, such as writing, spelling, the fundamentals of arithmetic, and the mechanics of written composition. In the report of the special classes of Richmond, Virginia, for example, the following statement is made:

> The children grasp new principles quickly and apply them to the practical problems independently, but often sacrifice accuracy on the mechanical side to their interest in working out the solution. This has necessitated much drill in the fundamentals of numbers. The arithmetic work is held back by the need of drill in the mechanical process but the grade work has been nearly doubled. The writing of these pupils is poor compared with their other work. This is because of the difference between their mental and physical development. In spelling these children eternally misspell the insignificant word and spell the unusual word. They spell the word correctly in written work and miss it when dictated in columns. The greatest progress has been in the geography and history courses. The content of the written work is rich and free. The form, however, shows carelessness. Among the most careless of the children are two scoring 156 and 138 I.Q.

These reports indicate what has been shown by means of general tests, that there are detailed or specialized abilities which develop at fairly definite stages or ages. Certain abilities seem to depend to a considerable extent upon the degree of physical development of the child. It will necessitate much study and experimentation to determine what the limitation of these stages are. It seems likely, however, that what is meant by the term "enrichment of the program" represents the process that is better suited to the bright pupils than a mere acceleration of work. Perhaps the type of work which is desirable may be described as carrying on the sequence which is adapted to the regular classes on a higher level. This, of course, is a vague expression and would have to be interpreted in detail to be made entirely clear. Perhaps we may say that the work of such children could well be more rationalized than that of the less gifted ones. In arithmetic, for example, we

might very well expect the bright children to understand more thoroughly the number processes instead of learning them in a mechanical fashion. In all subjects, without sacrificing accuracy and the acquirement of form, we might emphasize much more largely the ability to conceive and work out problems. To some extent it might be desirable to introduce at an earlier age some of the types of work which ordinarily come at a later age, but in many other instances the adaptation should probably consist rather more in an enrichment of the work and its prosecution on higher levels. This is a matter which must be the subject of much practical experimental work in the near future.

An interesting adaptation of school activities to superior pupils is reported from the junior high school at Kansas City. The pupils of the best division here are given special opportunity to engage in extra-curricular activities, and they are organized into a special group which meets with the principal regularly in order that they may be encouraged to exercise leadership in the school. This experiment indicates that the work of bright pupils may be enriched in such a way as to promote not only better intellectual development but also a better development of their social capacities. What might under some circumstances be a detriment is turned into an advantage by this procedure. The results of the special work upon the pupils' social development is referred to later.

The answers to the last question under curriculum indicate that the above interpretation of the current practice is correct, that is, the work of special classes is practically the same as the work of the regular classes, given in more rapid sequence.

MANNER OF SELECTION FOR SPECIAL CLASSES

The fourth question concerns the manner in which the children are selected for the special classes. The answer to this question undoubtedly reveals to some degree the carefulness and thoroughness with which the special groups are selected. The extent to which the tests are used measures roughly the degree of accuracy of the selection. The prevailing method is to base selection in the first instance upon the teacher's judgment, thirty-five replying that this method was used. In thirty-two cases it was reported

that tests and school marks were used. Unfortunately the question was not put in such a way as to distinguish between the tests in the school subjects and general tests. The probability is that in the majority of cases the tests referred to were tests in school subjects.

In most cases more than one basis of selection was employed. This is undoubtedly the best procedure. There is always a certain amount of error resulting from the use of any single basis of selection. Mental tests are probably the most accurate single index of the pupils' ability to do a high grade of work. In some cases this is the chief basis of selection. In Omaha, for example, those pupils are admitted whose I.Q. is 112 or more. However, there are some qualities which are important for success in school which are not revealed by intelligence tests. Such qualities are summarized by the term "school attitude." It is desirable to supplement the results of general tests, therefore, by the teacher's judgment. Ability in the school subjects which is not directly brought out in the tests is revealed in school tests and in school marks. The best procedure for the selection of such children is probably, first, a preliminary classification on the basis of general mental tests; second, an examination of this classification in the light of the teacher's judgment and of tests in the school subjects; and third, a special scrutiny of cases in which there is a wide discrepancy and the tentative classification of such cases subject to shifting in the light of their subsequent work.

A number of forms of general tests are now available for this purpose. The Stanford Revision of the Binet Scale is, of course, a well-known but somewhat laborious method. G. M. Whipple, as a result of his experiment at Urbana, has organized a set of tests for this purpose which is published by the Public School Publishing Company, Bloomington, Illinois. A number of group tests, somewhat after the manner of the army tests, have also been organized for use at various levels.[1] Among these may be men-

[1] Frances Lowell, "A Group Intelligence Scale for Primary Grades," *Journal of Applied Psychology*, III (1919), 215–47; Caroline E. Myers, "The Myers Mental Measure," *The Sentinel*, Carlisle, Pa.; M. E. Haggerty, *Standard Educational Tests, Delta 1 for grades 1 and 2; Delta 2 for grades 3 to 9*, Yonkers-on-Hudson, New York: World Book Company, 1920; S. L. and L. W. Pressey, *Mental Survey Tests*, published at the University of Indiana; A. S. Otis, *The Otis Group Intelligence Scale*, World Book

tioned the following: for the primary grades, the Lowell Scale, the Myers Mental Measure, the Haggerty Scale, the Pressey Scale, and the tests being developed by the National Research Council. A sixth test for the primary grades is being developed by F. A. Kingsbury, of the University of Chicago. For the upper grades there are the Otis Scale and the Haggerty Scale. For the high-school level there are the Pressey Scale, the Chicago Group Intelligence Scale, and the Haggerty Scale. The more difficult forms of the *National Intelligence Tests* may apply both to the upper grades and the high school.

SOCIAL DIFFICULTIES IN ADVANCEMENT OF BRIGHT PUPILS

The fifth question was designed to get at the problem which has already been mentioned with reference to the relation between the child's social and intellectual development. The objection which is often raised to the rapid promotion or acceleration of the bright children is that this brings them into association with children of advanced age and different social development. The replies to the questionnaire, however, did not indicate that such difficulties are serious. Twenty-nine answered the question, whether difficulties in social adjustment arise, by a categorical "no," four replied "yes," and twelve left the question blank. Those who replied that there was difficulty, however, stated that the advantages outweighed the disadvantages.

It should, of course, be kept in mind that the prevailing retardation in the schools produces the difficulties which are anticipated to arise from the advancement of bright pupils. The segregation of the bright pupils in a class by themselves would reduce the variety of ages of the pupils of the same group. This is well brought out in the report from Muskegon, Michigan. By taking the slow, so-called undesirables, out of the seventh grades and separating them from the bright pupils, the average age of the brighter pupils became twelve years and ten months, and of the duller pupils fifteen years. By this means eight pupils who were

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Company, 1919; H. O. Rugg and F. N. Freeman, *The Chicago Group Intelligence Scale*, Chicago, Illinois: University of Chicago Book Store; *National Intelligence Tests*. Yonkers-on-Hudson, New York: World Book Company.

regarded as undesirable associates of the younger children were removed from their group. The difficulty arises when a few isolated individuals are promoted far ahead of their age. It disappears, very largely at least, when the brighter pupils are organized into a group of their own. In fact, the difficulty not only disappeared in this case but a difficulty which is present in an ordinary organization was by this means actually removed.

REPORTS ON RESULTS

The answers to the first question on results indicate that the movement is one which is in the course of rapid development. The frequency of the periods of time during which the classes have been in existence is as follows:

Number of years organized...	20	18	12	10	8	6	5	4	3	2	1 or less
Number of cases.....	1	1	2	1	1	2	2	4	6	6	9

The number of cases increases rapidly in the recent years.

Contrary to the opinion which is often expressed, the effect of withdrawing the brighter pupils from the regular classes is helpful rather than harmful. Twenty-five reported that the effect was stimulating, four that there was no appreciable effect. None reported positive bad effects. One suggests the explanation of the benefit by saying that withdrawing the bright pupils removes their tendency to monopolize the time of the class. In Muskegon the scores of three divisions in arithmetic were kept throughout a semester. At the beginning, the poor division made the very low score of 32 per cent, and the better divisions made scores of 54.5 per cent and 70 per cent respectively. At the end of the semester the poor division had advanced to 77.9 per cent, bringing it to a rank midway between the two good divisions, which scored 72.4 per cent and 82 per cent respectively.

The answers to the last question indicate that for the most part the results of the experiment are satisfactory to those who have made it. Nine report that they plan to extend the work to include more schools or classes. Three report the intention of using more accurate means of selecting the pupils. Their plans include concentration of higher divisions into centers, organization of a summer school for superior students, the classification into finer

divisions, the introduction of a special teacher into each building, the classification of all junior high school students. The difficulties which arise in the adaptation of the curriculum to bright pupils are recognized by three, and these indicate their intention of developing the curriculum so that it will be better suited to the various sections. In four cases the introduction of the junior high school is mentioned as making the situation satisfactory, and the special classes are to be abandoned. Eight replies state that whereas this work is not at present being done there are plans under way for its organization.

The results of the questionnaire indicate that many experiments are being made with special classes and that the number of experiments is rapidly increasing. The organization of the work, particularly the adaptation of the curriculum to the bright pupils, is in a stage of great uncertainty. The results in general are highly satisfactory, but the best means of securing these results are not yet objectively determined. It would be very useful to the profession to have definite experiments, controlled by tests, carried on in the organization of special classes in order to determine the best procedure and the benefits and difficulties attending them.

INTRODUCTION OF GRADING INTO THE PUBLIC SCHOOLS OF NEW ENGLAND

PART II

FREDERICK DEAN McCLUSKY
Fellow in Education, University of Chicago

In the same year that the normal schools were established in Massachusetts another step was taken by the "volunteer council" toward the reorganization of the common schools. This was the law of 1838 which established the first union schools. That the law was intended to make gradation possible in the school system is shown by the following quotation from Mann's *Second Report:*

> The Report on School Houses, made by me to the Board in March last (see pp. 30, 31) detailing, among other things, a plan for a Union of School districts and a gradation of schools, in places where the compactness of the population would allow, was followed by the act of the legislature of April 25 authorizing a union of school districts for the important purposes specified.[1]

The rapidity with which these initial steps in the reorganization of the public-school system of Massachusetts took place was certain to bring down on the heads of the reformers strong opposition from the conservative element. For within three years after the appearance of Cousin's report, which served as Dwight's inspiration, a state Board of Education, a state secretary to the Board of Education, state normal schools, and union schools had all been established by law and were in operation.

The opposition became stronger and by the time of the Hartford Convention in August, 1839, educational affairs in Massachusetts were at the breaking-point. In fact, the situation came to a head in March, 1840, seven months after the convention, when the legislature appointed a committee to consider the expediency of abolishing the Board of Education, the office of the secretary, the

[1] Horace Mann, *Second Annual Report of the Secretary of the Board Together with the Report of the Board* (Boston, 1839), p. 36.

state normal schools, in fact everything the Board had accomplished, and were even going so far as to return to Dwight the $10,000 he had given toward the normal schools. The fight was extremely bitter and revolved in large part around the accusation that the *new Board was trying to fasten the Prussian system of education on the public schools of Massachusetts*. The following extracts taken from the official records of the legislature of the state of Massachusetts will suffice to show the status of affairs:

HOUSE OF REPRESENTATIVES, MARCH 7, 1840

The Committee on Education having been directed, by an order of the House of the third instant, to consider the expediency of abolishing the Board of Education and Normal schools, and to report by bill or otherwise, have attended to that duty, and respectfully submit the following

Report:

. . . . . .

And it is the conclusion to which they arrive, that the operations of that Board are incompatible with those principles upon which our common schools have been founded and maintained, that leads them to make this report. . . . . A very cursory examination of these documents (the Reports of the Board) will suffice to show that, so far from continuing our system of public instruction, upon the plan upon which it was founded, and according to which it has been so long and so successfully carried on, the aim of this Board appears to be, to remodel it altogether after the example of the French and Prussian systems.

These systems have a central Board, which supplies the ignorance and incapacity of the administrators of local affairs, and which models the schools of France and Prussia all upon one plan, as uniform and exact as the discipline of an army. On the other hand, our system of public instruction has proceeded upon the idea that the local administrators of affairs, that is to say, the school committee of the several towns and districts, are qualified to superintend the schools. . . . .

The establishment of the Board of Education seems to be the commencement of a system of centralization and of monopoly of power in a few hands, contrary, in every respect, to the true spirit of our democratic institutions; and which, unless speedily checked, may lead to unlooked-for and dangerous results.

Another project, imitated from France and Prussia, and set on foot under the superintendence of the Board of Education, is the establishment of Normal schools. Your Committee approach this subject with some delicacy, inasmuch as one-half the expense of the two Normal schools already established has been sustained by private munificence.[1]

[1] *Common School Journal* (Boston, 1840), pp. 225–29.

The minority report of the committee which supported the Board of Education does not deny the influence of Prussia, as will be seen from the following extract:

> The allegation that the Board are attempting to fasten upon our schools the compulsory system of Prussia or France is an extraordinary one. . . . . In the last two reports of the Secretary, he points out the difference between the Prussian system, which is arbitrary, and the Massachusetts which is voluntary, much to the advantage of the latter. . . . . Though the undersigned wish to correct so great a mistake, they do *not* wish to make the least intimation that any improvement is to be rejected, merely because it originated in Prussia or any other foreign land. Such a narrow prejudice would shut out a thousand blessings.
>
> . . . . . .
>
> In the Revolutionary War, our fathers had no hesitation in borrowing their system of military tactics from Prussia; but to take any instruction from the same quarter, when searching for the best modes of advancing public education, some persons seem to think, is fraught with danger. The State of Ohio, a few years since, with enlightened liberality, commissioned the Rev. Dr. Stowe to examine, while in Prussia, its school system. On his return, he made a report to the legislature of the State, which was afterward republished by our own Legislature. Let anyone examine that report and he will have no fears on this subject.[1]

Not only did the minority report of the committee admit that the Board was borrowing from Prussia but it defended this policy so effectively that the plans of the opposition were defeated. Among the men on the outside who were called on to defend the policy of the Board was George B. Emerson. His letter, written in support of the state normal schools, played a large part in strengthening the position of the Board.[2] It will be remembered that Emerson advocated borrowing the educational system from Prussia as early as 1837 when he wrote the second "Memorial" for the American Institute of Instruction. (See quotation from the "Second Memorial" on pp. 44–45 of the *Elementary School Journal* for September, 1920.)

Up to this time, in spite of the great changes that had taken place in the external organization of the Massachusetts public-

[1] *Common School Journal* (Boston, 1840), p. 232.

[2] For a full account of the affair, see Horace Mann, "Remarks at the Dedication of the State Normal School House at Bridgewater," *American Journal of Education*, V (August 19, 1846), 649.

school system, we find the actual internal organization of the schools had not been materially affected by the new scheme. However, after the victory of the Board had made its furtherance assured, the attention of these champions of Prussian educational practice was at once turned toward a reorganization within the schools themselves. This precipitated a controversy from a new quarter, the schoolmasters of Boston.

Let us now trace some of the steps taken to bring about this internal change. This then brings us to the fourth part of the discussion which will show, by tracing the movements and writings of Horace Mann and George B. Emerson, that there is a direct connection between their efforts and those of the Ohio group and that the final step taken in the Quincy School represents an emphatic change from the early Massachusetts experiment to a pure Prussian form of grading.

At the Hartford Convention in 1839, Emerson described the Boston grading system. It will be remembered that this was a scheme of graded schools in which the primary schools were the first grade, the grammar and writing schools (the double-headed schools) were the second grade, and the Latin grammar school and English high school were the third grade, also, that the internal organization of the grammar schools was arranged vertically by subjects. That this Boston scheme was entirely different from that advocated by Stowe and Barnard at the convention is shown by the fact that within six months after the convention Emerson describes the new system of grading and, in doing so, does not hold Boston up as an example.

The following extracts are taken from this description of grading which appeared in the *Common School Journal* edited by Horace Mann, February 15, 1840:

> DEAR SIR: The desire for advancement is a natural and commendable motive. . . . .
>
> I shall suggest, in a few words, some modes in which this may be done.
>
> 1. The pupil may be led to desire to be more perfect in the study in which he is engaged. . . . .
>
> 2. He will need little excitement, to be made to desire to rise to a higher class or division. Let him desire it; let him be advanced, but only with the condition that all, as he goes, be learnt thoroughly. The stimulus may act upon

a whole division, consisting of many individuals. All may push on together, without ill feeling to a higher division. . . . .

3. There is sufficiently strong desire always existing among children to go on to higher studies. Here then is a motive, already active. It may be rendered useful, by faithfully requiring thoroughness in the present study, as a condition of advancement to a new one. An examination may determine the qualification; or, if the same teacher have charge of both classes, he may decide, without special examination that a part or the whole of one class is qualified to go on to a higher, or to pursue another, study.

4. A school may be divided into several divisions according to general progress and deportment. Let the grades be numerous enough, so that the distance between contiguous divisions shall not be great. . . . . And the contest is prevented from being a personal one by the names in each division being arranged alphabetically. Fifteen, or any other number of pupils, may thus have the satisfaction of having raised themselves, from grade to grade, to the first division, without having any emulation, as no one of the number shall know which is the highest or lowest of the fifteen.

5. If there be a system of several connected schools examination for each higher one may be rendered a strong motive to study. . . . . It seems very desirable, and very practicable, to introduce a gradation of schools into all the large towns of New England. . . . .

I am aware that a system of the kind I refer to already exists in some towns; and I believe that, wherever it has been adopted, great advantages have been found to follow from it.[1]

Yours, etc.

G. B. E.

One can readily see how antithetical this new grading system was to the program of the district schools, union schools, and double-headed grammar schools, in which personal emulation and competition were strong motives for gaining knowledge. Here we find a new scheme being advocated, so that "fifteen, or any other number of pupils, may thus have the satisfaction of having raised themselves, from grade to grade, to the first division, without having any emulation, as no one of the number shall know which is highest or lowest of the fifteen"—a new scheme that "faithfully requires thoroughness in the present study, as a condition of advancement to a new one," and an examination to determine the qualification for advancement if a different teacher have charge of the class—a new

[1] G. B. Emerson, "Motives to Be Addressed in the Instruction of Children," *Common School Journal*, II (February 15, 1840), 52–53.

scheme which Emerson believed should be introduced "into all the large towns in New England."

It was before this new grading system was discussed by Stowe and Barnard at Hartford and before Mann saw Cincinnati that the union schools had been set up by Mann in Massachusetts. As was pointed out at the first of this paper, these union schools were not graded except as they divided the older from the younger children. However, even this early plan had its relations with Prussia, as was shown above, but the adoption of the Prussian system was not so complete as it was in the first move in Ohio and as it was to be later in Massachusetts itself.

After Mann's visit to Cincinnati, and after the Hartford meeting, things moved in another direction. The new experiment in grading was tried in several places with success. One extract from the Massachusetts school returns for 1841–42 will suffice to show how it was regarded in Haverhill after its adoption:

> The stimulus which the system of gradation has exerted upon these schools has, thus far at least, been eminently favorable. . . . .
>
> Of the new system, as now established in this district, your committee would say in general, that it is based upon the principle of division of labor on the part of the teachers according to the character and attainments of the scholars who are to be instructed. . . . . Every man can see that a teacher whose scholars are so nearly of the same age and acquisitions that he can readily classify and instruct them in the branches committed to his especial care can give far better and more instructions than if his school embraced all ages from 5 to 21 years, and all gradations of attainment from the child in the alphabet to the youth just ready to enter college. . . . . The new system on the contrary, renders the highest instruction in the district accessible to all. . . . .
>
> With these views of its nature and utility, your committee have seen this system submitted to the experiment which is in progress, with the most entire confidence in the result.[1]

It is interesting to note that the Haverhill school committee which wrote the above termed it a "new system" and an "experiment"; also that the age limits of five to twenty-one years had to go, now that gradation was adopted. These two items alone are significant in view of the prominence then being given to the German system of common schools, which was not only new to this side

[1] *Abstract of the Massachusetts School Returns for 1841–42.* Boston (Haverhill, Essex County), p. 11.

of the Atlantic but embraced the ages of six to fourteen years. Furthermore, on October 16, 1840, seven months after Horace Mann's visit to Cincinnati where he saw the Prussian scheme in practice, Haverhill was the meeting place of one of Mann's County School Conventions which he attended and at which all the current educational ideas were discussed.[1]

It was during the spring following the Hartford meeting at which Stowe described the Cincinnati system that Horace Mann was himself a visitor in Cincinnati. From this time on until 1843 the controversy between himself and the Boston schoolmasters grew in intensity. After Mann went to Germany in 1843 and after the publication of his famous *Seventh Annual Report*, in which he described the Prussian system, the breech between Boston on the one side and the new plan on the other became acute. The report acted as a last straw and precipitated a heated debate between himself and his opponents. Cubberley points out that the debate between Mann and the Boston schoolmasters served to give the report a wider notoriety than that attained by any other.[2]

In this report under the caption of "Classification," Mann describes the Prussian system in bold terms as follows:

> The first element of superiority in a Prussian school, and one whose influence extends throughout the whole subsequent course of instruction, consists in the proper classification of the scholars. In all places where the numbers are sufficiently large to allow it, the children are divided according to ages and attainments, and a single teacher has charge only of a single class, or of as small a number of classes as is practicable.
>
> I have before adverted to the construction of the schoolhouses, by which, as far as possible, a room is assigned to each class. Let us suppose a teacher to have the charge of but one class, and to have the talent and resources sufficient properly to engage and occupy its attention, and we suppose a perfect school. But how greatly are the teacher's duties increased, and his difficulties multiplied, if we have four, five, or half a dozen classes, under his personal inspection. While attending to the recitation of one, his mind is constantly called off, to attend to the studies and conduct of all the others. . . . . All these difficulties are at once avoided by a suitable classification—by such a classification as enables the teacher to address his instructions at the same time to all the

[1] *Common School Journal*, II (1840), 252.

[2] E. P. Cubberley, *Public Education in the United States*. Boston: Houghton Mifflin Co., 1919, pp. 278–79.

children who are before him, and to accompany them to the playground, at recess or intermission, without leaving any behind who might be disposed to take advantage of his absence. All this will become more and more obvious as I proceed with a description of exercises. There is no obstacle whatever, save prescription, and that *vis inertia* of mind which continues in the beaten track because it has not vigor enough to turn aside from it to the introduction, at once, of this mode of dividing and classifying scholars in all our large towns.[1]

It was this graphic description of the Prussian mode of classifying scholars that later was the basis upon which the scheme was introduced into the Boston grammar schools.

The controversy which this *Seventh Report* caused ended in a complete victory for Horace Mann. Public opinion being so strongly against the Boston masters, they dropped the fight. This affair served to bring Horace Mann and his followers to the front, and it was no accident that George B. Emerson was appointed as chairman of the annual visiting committee of the public schools of Boston for 1847 and 1848. His report on the condition of the school system of Boston in 1847 dispels any idea that one may have as to the existence of a system of grading within those schools which was to blossom into the rigidly graded, one-teacher-to-a-class, one-class-to-a-compartment, plan that he set up the next year (1848) in the Quincy Grammar School.

The following extracts from Emerson's report will suffice to show the condition of affairs in the Boston grammar schools in 1847:

> Another evil of the system of two equal heads, is the inequality and unfairness of its operation.
>
> . . . . . .
>
> The arrangement of the children in classes would be more just and more satisfactory if made by one master, than it can be if made by two. For it must often happen that one master will place high in the first class a pupil whom the other master would leave low in the second class. This must of necessity take place, so long as the opinion of one of the masters is formed from his knowledge of one part of the mind and character of the pupil, while the opinion of the other is formed from his knowledge of another part of the mind and character. This must inevitably happen, and inevitably lead to injustice towards the pupil. . . . .

[1] Horace Mann, *Seventh Annual Report of the Secretary of the Board, Together with the Report of the Board* (Boston, 1844), p. 84.

Every pupil, under the two-headed system, is now subjected to considerable inconvenience from the necessity of conveying his books from school-room to school-room. . . . .

All this inconvenience and injury would be saved under one system, as each pupil might have one desk, which would be his for months together. . . . .

There is no necessary connection between the different branches now taught in the writing schools.[1]

The most defective part of our system is, as has been already stated, that which affects the condition of the children in the lowest classes in the grammar schools—those recently promoted from the primary schools. . . . . To many of the children it is a serious misfortune to be promoted, as it is equivocally called, from the primary schools, where they are doing well, to the grammar, where they do nothing.[2]

All parts of the system should be strictly and exactly subordinated. The studies in each part should be arranged with reference to those of every other part. Each lower department should be preparatory to that above it, and every child should be advanced according to his attainments. Especially should the evil be avoided of allowing a few bright children to remain, to be made a show of, at the head of an inferior school or class, when the effect is to delay their real progress, and to draw off the attention of the teacher from the many who particularly need his care, to the few who will most contribute to his reputation.

There is, therefore, one other defect to be noticed and it is one which apparently admits of but one certain remedy. It is the want of connection between the various parts of what we call our system, but which, in consequence of this want, loses its chief claim to be considered a system.[3]

After thus pointing out the defects in the system Mr. Emerson proposed a plan to remedy the situation which sketches the single-headed scheme which he afterward put into operation in the Quincy School. This plan was printed with the report and entered as Note A, in the Appendix. Some of its essential features are in part as follows:

We think it would be better if only one master were made responsible for the general arrangement and discipline of the whole school, and, at the same time, for the whole instruction and discipline of the first class, or of the first and second classes.

. . . . . .

In each of the schools a second master might be appointed, with the special charge of the government and instruction of the second, or of the third class,

[1] *Report of the Annual Visiting Committee of the Public Schools of the City of Boston* (1847), pp. 47–49.

[2] *Ibid.*, p. 58. [3] *Ibid.*, p. 62.

but subordinate, as to general principles of discipline to the Head Master, so that one system of government might prevail throughout the school. . . . . The schools are too different in their materials to admit of the introduction of precisely the same course in all. Yet the Committee think that definiteness ought to be given to the objects aimed at in the different classes, by requiring certain things in each branch to be accomplished by each class. . . . .

It should be the duty of the Head Master to superintend the admission of all children into his school and to assign them their places, according to their several degrees of advancement, in the several classes. Or, if the first and second classes were assigned to one of the masters, and the third and fourth to the other, this duty should be imposed upon each master, for his own portion of the school. Such an arrangement, faithfully and carefully made, together with a requisition of something definite in all their studies, from each class, would put an end to an evil which is now loudly complained of in many of the schools. It is, that children, after their promotion from the Primary Schools, sometimes remain apparently stationary for whole years in the lower classes in the Grammar Schools.[1]

It is evident that had the course of study and program of the Boston grammar schools been divided horizontally instead of vertically it would have been impossible for children recently promoted from the primary schools to remain stationary in the lower classes of the grammar school for years. It was to remedy this evil that Emerson proposed the adoption of the "requirement of certain things in each branch to be accomplished by each class," or in other words, the division of the program of subjects horizontally—which was an essential feature of the Prussian form of grading. Furthermore, to facilitate such a division of subjects horizontally in an administrative way, Emerson proposed the one-teacher-to-a-class plan, another idea borrowed from Prussia.

The appearance of this report was greeted with delight on the part of Horace Mann. He gave ten pages of his journal to a detailed review of the report on grammar schools and in commenting on it said:

We have been waiting long and almost impatiently for the appearance of the Annual Report, for 1847, of the Visiting Committees of the Boston Grammar and Writing Schools. It has come at last, in the shape of an octavo of more than two hundred pages. The larger part of the volume is occupied by the Report of the Committee on Grammar Schools drawn up by George B. Emerson, Esq.[2]

[1] *Ibid.*, pp. 111–23.

[2] *Common School Journal*, X (1848), 49.

In consideration of the above facts, we will now show that George B. Emerson secured the ideas for this new plan of grading, which was to remedy the evils in the Boston system, directly from the Prussian example.

We have already seen his connection from the first with the reorganization movement. He wrote the two "Memorials" sent to the legislature in 1836-37 even defending his policy of borrowing from Prussia. He discussed gradation at the Hartford Convention with Professor Stowe and Henry Barnard. He wrote a description of the new system of gradation as early as 1840. He supported the Board and the normal schools in their fight with the legislature in 1840. Furthermore, in an address given at the dedication of the new schoolhouse at Somerville, in 1848, he outlined the new plan of gradation, acknowledging that the leading features of the plan he had been recommending had been explained in the reports of the secretary of the Board of Education. The following extracts are taken from this speech:

> In what I have said, I have attempted to give only a sketch of the general plan, and an outline of the course to be pursued in the several schools. To many important particulars I have not had time even to allude. What I desire to aim at in the plan is this, that, as far as it is possible, all who are at the same point in their studies and progress, should be together, under the guidance of one teacher and they only should be present, for illustrations on the blackboard and all other direct instruction may be given to a whole school at once, as well as to a single scholar, and if any others than the class are present, they are an interruption to the teacher and are themselves interrupted by him. . . . .
>
> If all in the same apartment were of one class, and under one teacher, and with the same lessons to learn, much more might be done, and better done, and in a shorter time. Under such an arrangement, the difficulties of government would be nearly annihilated, short sessions would take the place of long sessions, and time would thus be gained for healthful exercise and recreation in the open air.
>
> Another advantage would be, that the desire of advancement from one grade of school to another, would be a healthful stimulus to exertion, and might take the place of personal rivalry—the most pernicious evil, which now exists in schools.
>
> Another advantage would be, that the progress of a child from the beginning to the end of his course, would be likely to be onward. . . . .
>
> The leading features of the plan I have been recommending have been explained in the Reports of the Secretary of the Board of Education, and High

Schools, formed by the union of several contiguous districts, have been established with gratifying success in several of the towns of the Commonwealth.[1]

The parallel between Emerson's plan and that outlined in Mann's *Seventh Report* in his description of the Prussian system, quoted above, is evident.

Here then is the *acknowledged source* of Emerson's new plan of grading—the plan he described in the report of the school committee—the plan he put in operation the same year, 1848, in the Quincy Grammar School—the plan that was later adopted by every grammar school in Boston within six years after the Quincy School experiment was launched on its way.

The story of the establishment of the Quincy Grammar School, in 1848, is plainly described in the *Annual Report of the School Committee of Boston* for 1859. The occasion for writing such a historical sketch is to be found in the fact that the original Quincy schoolhouse was destroyed by fire the night of December 17, 1858. The committee's historical sketch of the school is in part as follows:

> On the 30th of August, 1847, by a unanimous vote of the Board, it was decided to make it a single-headed school. . . . . A committee consisting of George B. Emerson, John P. Putnam, and T. M. Brewer, was appointed to confer with the city government, for the plan; and the experience and judgment of its chairman largely contributed to the adoption of the admirable plan that was agreed upon, and upon which the Quincy and the Hancock—the latter not upon the full plan—were constructed. Hon. John H. Wilkins was chairman, at that time, of the Committee on public buildings, and was invaluable to the new experiment. . . . .
>
> The Quincy School was the first single-headed school successfully organized in Boston. The schoolhouse was the first constructed on the plan of a single room to a teacher. In six years after its organization, not a double-headed school was left in Boston, and now fourteen Grammar schoolhouses are built substantially on its plan, and another is in process of erection.[2]

We see that full credit is given to the chairman of the Committee on Conference for the adoption of the new and admirable plan. Who was the chairman of this committee made up of George B. Emerson, John P. Putnam, and T. M. Brewer? In a speech given

[1] George B. Emerson, "Address on Education," *Common School Journal*, X (1848), 325–26.

[2] *Annual Report of the School Committee of the City of Boston* (1859), pp. 11–12.

by Mr. Brewer at the dedication of the rebuilt Quincy School in 1859, we find the answer:

> The dedication of the Quincy School-house twelve years ago next June marks an important era in the history of the Boston Public Schools. This school, with the Mayhew, organized contemporaneously on the same system, was the first single-headed school with graded divisions of classes, from the lowest to the highest, successfully organized in Boston. It was spoken of as an "experiment" as an "innovation" of doubtful advantage by its opponents. . . . . For many of the advantages of the new plan the city was indebted to Hon. John H. Wilkins, Chairman of the Public Building Committee, and to George B. Emerson, Esq., Chairman of the Conference Committee on the part of the School Board. With the latter it was my privilege to be associated. . . . . Twelve years have brought with them surprising changes, all of them first initiated within these walls. We have lived to see its house the model for Boston School-houses, and the plan of its school made the universal system throughout the city.[1]

Thus it was that George B. Emerson, as chairman of the Committee on Conference, caused the Prussian plan of grading to be adopted in the first single-headed grammar school in Boston. The experiment was so successful that we find every grammar school had adopted it within the short space of six years.

However, Boston alone did not try the new scheme. This brings us to the fifth and last part of our discussion in which we will find that the Quincy School, which was the first clear Massachusetts example of a graded school, carried over directly to St. Louis and Connecticut.

W. T. Harris, writing about the architectural innovation in the Quincy Grammar School and its influence says:

> Instead of a large study room, with small recitation rooms opening out from it, there were twelve large rooms intended to be occupied each by a single teacher, who was to have charge of the discipline of the pupils while studying, as well as the classes when reciting.
>
> This point in regard to architecture is by all means the most important item in the whole plan of organization.[2]
>
> In the system of schools of St. Louis after the adoption of the Boston style of building, corporal punishment decreased from an average of five hundred cases per week for seven hundred pupils to three cases for that number. Judge of the benefit to the schools of the Central Plain of the United States from this

[1] *American Journal of Education*, XII (1862), 713.

[2] W. T. Harris, *A Memorial of the Life and Services of John D. Philbrick* (Boston, 1887), p. 65.

architectural innovation of Boston. But another benefit of almost equal magnitude arose from the close grading of classes which the new system produced.[1]

The first principal of the Quincy School was John D. Philbrick. He was eminently successful in carrying out the new grading plan Emerson borrowed from Prussia. The account of how Philbrick carried the new plan into Connecticut is told as follows:

As soon as Connecticut had established a normal school, in 1852, Dr. Henry Barnard, the state superintendent there, secured Mr. Philbrick to organize it. As principal he preached in that normal school the new doctrine of graded schools, and, finally, in institutes all over the state, held by him after he became the state superintendent, he continued to proclaim the same idea, reaching all the intelligent minds open to new ideas on the subject of education.[2]

Thus it was that the new grading system was spread, slowly at first, but with sufficient rapidity that by 1870 every city of consequence had adopted the scheme.

In this article it has been pointed out, first, that in Ohio the graded system came directly from Prussia and superseded the district school (the case here having no complications); second, that there was a direct connection between Barnard's work in Connecticut and that of the Ohio group; third, that the early Massachusetts changes were prompted by the Prussian influence; fourth, that by tracing the writings and movements of Mann and Emerson we found there existed a direct connection between their efforts and those of the Ohio group and that the final step taken in the Quincy School represents an emphatic change from the early Massachusetts experiment to a pure Prussian form of grading; fifth, that the Quincy School carried directly over to St. Louis and Connecticut.

It is very evident that these well-meaning American educators of 1830 to 1850 did not see the undemocratic features of the Prussian graded school. To them the scheme was not only desirable but democratic as well. We know only too well the effects of one teacher to a class, with each class to a separate room, combined with a definite requirement of work to be accomplished, before promotion by examination to the next grade can be brought about. These were the main features of Emerson's borrowed plan and they are the underlying causes of the rigidity of the present system, which is rightly called the "lock-step" elementary school.

[1] *Ibid.*, p. 67. [2] *Ibid.*, p. 70.

BINET-SIMON TEST IN PRACTICAL USE IN THE PUBLIC SCHOOLS OF HINSDALE, ILLINOIS

JESSIE MARTIN ALEXANDER
Hinsdale, Illinois

The success of a teacher is usually judged by the standard of work she is able to secure from her pupils. This is especially unfair to the first-grade teacher, as the only requirement for entrance is that of age. By the time the children have reached the second grade they have been sifted to a certain extent, although many are sent on who are not mentally ready for the work. Usually nearly one-third of the first-grade children would benefit by taking work more slowly.

Last year I decided to test my fifty-three first-grade pupils and group them according to their mental ages. The first three weeks of school were spent in getting acquainted with the children and dividing them very carefully into three classes: *first*, the brightest; *second*, the average; *third*, the slow.

The test began with the brightest pupils and proceeded down to the slowest. The first surprise came when the boy whom I had supposed to be the brightest child in the room was found to have an intelligence quotient (I.Q.) of 126, but was surpassed by four others, one testing 134. Comparing ages, I found that this apparently brightest pupil was a year older than the other children, which maturity had given him the advantage of seeming more intelligent.

In the second group were two children with very high rating, who, however, had been doing very mediocre work. For some reason they had not been interested; but upon being placed in Class 1 they soon made up the work skipped and proved their right to stay there.

A child in Class 3 showed an I.Q. of 121. His trouble proved to be entirely due to physical conditions.

In many cases it hardly seemed possible that the pupils should be grouped as I had to rearrange the classes after the testing was finished, but time proved each case to be better placed than at the first classification. Perhaps the greatest help of all came from the clearer understanding of each individual child—the change of attitude on my part. The pupil of average or above average mentality could be reached in one way or another and it evidently was the teacher's place to do it.

While many in Class 1 might well have been promoted a half-year earlier, conditions made it impossible. They were, therefore, given much extra work and allowed to progress as rapidly as possible.

Many special cases throughout the school system have been sent in for the test. One in particular was a little girl in the third grade who was failing in her work. She had been a dreamer always and many times had come to school a half-hour late with a bouquet of grasses or flowers picked on the way. In spite of the fact that she came from an excellent family, her teachers began to think her "queer," "stupid," defective. The mother asked for the test. She had an I.Q. of 108. When the report was given to her teacher, she remarked, "If she has the brains, then she will have to work." Unknown to the teacher, I tried working with the child in my own home. At first we did clay modeling of the animals in which she was interested. She showed remarkable talent and originality. The clay was cast in plaster and tinted. During that time no reading was done but much time was devoted to a discussion of animals, which led us to books for reference. She was given a book of animal stories and asked which one she would like to read. As she had no choice, we read a bit at random and looked at pictures and later started a continued story of a rabbit, reading just enough to get to the most interesting part. Soon she began reading to herself while I prepared the paints. When she asked to take the book home to finish it, she was allowed to do so. We dipped into all kinds of books on animals, until she wanted to read in order to know more about them. She began to improve with astonishing rapidity and at the end of a month her teacher, who knew nothing of the work we had been doing, exclaimed, "It is astonishing the way that child has changed; she has improved 100 per cent."

Another case very much like this was that of a boy about eleven years old, who did almost nothing in school. He, too, had a high I.Q. Although his teacher would hardly believe the report, she set about seeing what she could do. Her efforts were well repaid when he later led the entire room in a test.

The Binet test usually reveals the real difficulty. The children enjoy taking it and often confide their troubles. Such reasons as the following are given surprisingly often: "Don't like to go to school," "Just not interested," "Have to keep still," "Teacher is cross," "Can't do arithmetic."

The teachers have been unanimous in saying that the use of the test has helped them. It changes their attitude. Instead of being punished, mentally deficient pupils are given work they can do, while normal children are given a physical examination, and every inducement to make good is held out to them.

Educational Writings

REVIEWS AND BOOK NOTES

Vocational education.—The problems of vocational education have brought out many discussions which are often confusing because of their lack of agreement and the diversity of their claims. There has been a need for a comprehensive treatment of the subject which would gather up the various points of view and give a scientific evaluation of the general problem in relation to the entire field of education. President Hill has attempted to do this in a somewhat encyclopedic treatment[1] of the whole field of vocational education. The scope of the book is well expressed in a paragraph from the Preface:

> The aim of our undertaking, which has been steadily to furnish an introduction to the study of the vocational aspects of public education, has forced us to make the book one of considerable scope. We are supposing that the reader will be interested in obtaining a bird's-eye view of *the relation of public education to democracy*, of the auspices *of vocational education in its historical development*, of recent *federal legislation*, of those aspects of education called *agricultural, industrial and trade, commercial*, and of the *vocational education pertaining to girls and women*. We deem it of especial importance to point out the significant facts and principles which are exhibited in the contemporary movements for *the application of the research method in behalf of both our schools and industry*. This movement is developing rapidly and although we believe that we have set forth the most significant points of interest and the literature of the subject, nevertheless, this chapter of the book must be regarded strictly in the light of an introduction to a vast and important field. The same reservation is of course made in writing upon the different topics of *applied psychology* [p. xi].

President Hill makes an elaborate attempt to give vocational education its proper setting and to harmonize its program with that of general education. He attacks the question of single or divided organization and states his position with clearness:

> It has yet to be demonstrated anywhere in the world that, in the education of an individual, specialized vocational education can be divorced safely and permanently from general and liberal education. There are hours, weeks, semesters, years, during which one's attention must be exclusively centered upon the acquisition of specific skill and practical knowledge—but during the active years of every human being under democracy, there must be provided ready access to the choicest fruits of general and of liberal education [p. 38].

[1] DAVID SPENCE HILL, *Introduction to Vocational Education*. New York: Macmillan Co., 1920. Pp. xvii+483.

Speaking later in regard to which schools should teach vocations, he says:

> Neither the women nor the men in academic high schools as a rule are prepared by training and contact with industries to teach boys the specialized dexterity and knowledge necessary in common skilled occupations. Shall we then erect separate, distinct, vocational schools under public control? It is to be admitted that in some instances this step is necessary in order to achieve the objects desired, although even in separate schools the individual cannot be permanently separated from opportunity for general and liberal education. As we have indicated (page 38) there cannot be a safe divorcement in the lifetime of an individual between general and liberal, and specialized vocational education under a democracy. Obviously, new types of teachers, new processes, and productive shops will be needed in public high schools, if the divorcement is to be avoided [p. 140].

One section of the book gives a careful review of the development of federal participation in vocational education, including a critical discussion of the Smith-Hughes Act. Another section, consisting of five chapters, undertakes a detailed consideration of the school problems in vocational courses in agriculture, mechanical and trade industries, commerce, and home economics. The concrete character of these chapters makes them of especial value to the school administrator and to students seeking to become familiar with the organization of vocational courses.

The book is well organized for use as a textbook. Each chapter is clearly outlined and is followed by a summary of important conclusions. Excellent bibliographies are furnished throughout. At the close of every chapter a series of carefully prepared exercises is given to stimulate further thinking. Numerous tables and graphs are used. The book is well adapted for use as a basic text in introductory courses in vocational education.

Reconstruction of school curricula.—The school curriculum has been the focal point for much of the current criticism of education. A demand has come from many sources for less formality and more vitality in the course of study. Departments of education in many schools throughout the country are devoting much time to research in this field. Professor Meriam, who has been experimenting for a number of years with a reformed curriculum in the University of Missouri Elementary School, has written a book[1] in which he attacks the whole problem of curriculum-making.

The point of view and the aim of the volume are well expressed by the author when, in speaking of the usual means of changing the curriculum, he says:

> All of the changes indicated are but a sort of patchwork. Omissions are made where the curriculum becomes crowded. Enrichment is suggested where the work seems barren. Motivation through the introduction of really vital subject-matter is attempted where the usual work does not appeal. The practical is introduced where

[1] JUNIUS L. MERIAM, *Child Life and the Curriculum*. Yonkers-on-Hudson, New York: World Book Co., 1920. Pp. xii+538. $3.60.

the course of study seems of little value. By such means and others, our school curriculum has been continually changing. Indeed, continual change is necessary if the school is to serve a rapidly changing and rapidly advancing civilization. But the changes noted are without any fundamental principle; they are spasmodic, personal, temporary, local. In place of such chance adjustments is it not possible to *make* a curriculum of a more permanent character and of universal application? This is the problem undertaken in this volume [p. 74].

In the first five chapters of the book the author sets up his point of view and reviews the criticisms which are commonly urged against the curriculum. In chapter vi there is a discussion of the social conditions which serve as a basis for educational principles. In working out these principles, Mr. Meriam maintains that there should be a close co-operation between students of education and sociology, the latter being held responsible for the immediate research into actual social conditions. Chapter vii gives a brief survey of the educational tendencies apparent in recent changes which should be familiar to the curriculum-maker. In the next five chapters the author presents five basic principles which should guide in the construction of a curriculum. A statement of these principles, which are founded upon social problems and the interests of the individual, will indicate the character of these chapters:

1. The curriculum should provide for meeting the immediate needs of the pupils primarily; only secondarily should it provide for the preparation of pupils for later needs.

2. The curriculum should be expressed in terms of concrete everyday activities of pupils and adults rather than in terms of generalization such as are found in traditional subjects.

3. The curriculum should provide for great individual differences in order to meet varying tastes and abilities of the pupils.

4. The curriculum should be so organized that the various topics may easily be interchanged not only within any grade during the year but from grade to grade.

5. The curriculum should provide for an acquaintance with both work and leisure [p. 382].

The next four chapters present four school studies which are proposed as the content for a curriculum. The remainder of the book discusses various details of the proposal and gives an evaluation of the methods and results in the use of such a curriculum.

The reader may be unable to agree with all of the conclusions of the book, but it furnishes material for critical thought, and will be of interest to those dealing with courses of study. The manner of presentation is somewhat tedious at times, and one feels that occasional condensations would serve to emphasize the content. The impression left with the reader is, not that the book has solved the problem of the curriculum, but that it has furnished evidence from one type of experiment which is significant and which should be added to the general body of data bearing upon this subject.

New series of education books.—Students of education will be interested in the beginning of a new series of books, edited by George D. Strayer, entitled

the "American Education Series." The type of books to be included is outlined in the following statement by the editor.

> This series will be developed in relation to the more important problems as they are today recognized or as they emerge, and will be written by those who have unusual skill in treating concretely these professional problems. No book will be issued merely because other books have appeared under certain titles which seem to round out a comprehensive treatment of the field of education. Any book, in order to be included, must have furnished a satisfactory answer to the question, Will this book increase the efficiency of some group of workers in the field of education? Volumes in the series will appear from time to time as it is possible to meet these proposed standards [p. 6].

During the last few years several books have appeared having for their purpose a general introduction to the study of education. The first number of the "American Education Series"[1] is an attempt to add to this class of writings. "The chapters which are included in this book will be found valuable for teachers who are receiving their initial training in normal schools or colleges, and also for those whose professional training is continued through the work of reading circles and teachers' courses in the school systems in which they are employed" (p. 8).

The major part of the book is given to the treatment of the administrative, rather than the teaching, aspects of education. The book opens with a discussion of the larger problems of education in a democracy, which leads into a second chapter dealing with the organization of public education and the functions of state and local control. The next five chapters are devoted more specifically to the technique of teaching and the problems of class management. Most of this material resembles the stock discussions which are common to texts on school management. Beginning with chapter viii there is an attempt to familiarize the teacher with many problems of administration and supervision, in order that she may have a sympathetic appreciation of the work of the superintendent. This section of the book includes such topics as the classification and progress of pupils, the use of standardized tests, daily programs, records and reports, the school plant and equipment, and co-operation with auxiliary educational agencies.

The book consists of an omnibus discussion of educational problems on an elementary plane. So many topics are introduced that the limits of space often prohibit an adequate treatment. For example, in the chapter on "Measuring the Achievements of Children," very brief discussions and samples are given for tests in arithmetic, reading, English composition, spelling, and algebra. A type discussion, presenting in greater detail some test in a single subject and accompanied by some explanation of the basic principles of educational testing, would probably leave a clearer conception of the movement in the mind of the beginning student. This same chapter treats the subject

[1] G. D. Strayer and N. L. Engelhardt, *The Classroom Teacher at Work in American Schools*. New York: American Book Co., 1920. Pp. 400. $1.48.

of intelligence tests with six lines of description and two pages of sample exercises.

The greater part of the book contains little that is new, but is a restatement of material which is already familiar to all except elementary students of education. It will doubtless be used in many introductory courses. However, as the initial book of a new series, it promises little in the nature of constructive thinking on educational problems which is vital to the development of a science of education.

Educational Psychology.—The study of educational psychology is developing many methods of investigation. One of these is the selection of a single type of mental experience, subjecting it to a careful analysis, and then studying its application to the processes of education. Professor Kirkpatrick has written a stimulating book of this kind dealing with the imagination.[1] It is divided into three major sections. The first of these, entitled "Imagination and Related Activities," undertakes to clarify the general conception of the term imagination and to show its relation to other types of mental experience. In seven chapters the author gives, in non-technical language, an analysis of mental images which furnishes the reader with the definite understanding of psychological terms necessary for accurate thinking while following the application of the imagination to education.

The second section, consisting of six chapters, presents a study of the imaginative life of the child. The characteristics of the imagination at different ages are shown, and its development in child life is made vivid by the use of much illustrative material. Such topics as imaginary companions, truth and fancy, romantic imagination, and adolescent ambitions are discussed in a manner which gives the reader a clearer insight into the social psychology of school children. Much of this material has a direct application to the problems of school discipline.

The last section is concerned with the use of the imagination in various school subjects. There are chapters dealing with its application to reading and spelling, drawing and construction, arithmetic, history and literature, nature study and science, and geography. The treatment is characterized by a clearness of presentation which is quite at variance with the confused manner in which the subject of imagination is frequently discussed.

The book should be of interest to all students of educational psychology, to elementary teachers desiring to improve the technique of their instruction, and to administrators who feel the need of a clearer understanding of the imaginative life of the child. The exercises at the end of each chapter furnish interesting topics for group conferences.

[1] EDWIN A. KIRKPATRICK, *Imagination and Its Place in Education.* Boston: Ginn & Co., 1920. Pp. x+214. $1.48.

Rural-school control.—One of the neglected factors in American education has been the rural-school trustee. Very little has been written for his particular needs, and his contribution has been generally regarded as of little significance. President Showalter has been concerned with the interests of the 250,000 trustees of one-room rural schools, as well as with the many thousand additional school-board members who are controlling education in the small villages of our country, and has prepared a handbook[1] for their use.

The book does not project any great reform propaganda for rural education. It attempts to present to the conservative rural-school trustee the information which he needs for the progressive improvement of his school. The chapters discuss the general plan of school organization, the duties of school trustees, the management of finances, and the provision of a properly equipped school plant fitted to the needs of a rural community. They further discuss the selection of a teacher and as much of the details of school procedure as properly come within the control of the board of trustees. Chapters dealing with consolidation, health education, hot lunches, and an enriched curriculum are presented in such a manner that they serve to widen the point of view without appearing to deal with impossible or impractical extensions of rural education. The illustrations and diagrams are well chosen to stimulate the interest of the reader.

County superintendents and rural teachers would do well to bring this book to the attention of their school trustees. Granting that the district system is antiquated and that reorganization is badly needed, it is still worth while to attempt to secure the best possible service from rural trustees while operating under this system.

Elementary text in general science.—The natural interest which children have in scientific phenomena is often deadened rather than stimulated by their first course in school science. In order to capitalize this instinctive curiosity, C. W. Washburne has written a general science book[2] which is based upon the interests revealed by a collection of two thousand questions asked by children of junior high-school age.

The method of organizing the book is stated in the Preface:

> The questions collected were asked by several hundred children in the upper elementary grades, over a period of a year and a half. They were then sorted and classified according to the scientific principles needed in order to answer them. These principles constitute the skeleton of this course. The questions gave a very fair indication of the parts of science in which children are most interested. Physics, in simple, qualitative form—not mathematical physics, of course—comes first; astronomy

[1] N. D. SHOWALTER, *A Handbook for Rural School Officers.* Boston: Houghton Mifflin Co., 1920. Pp. xiii+213. $2.00.

[2] CARLETON W. WASHBURNE, *Common Science.* Yonkers-on-Hudson, New York: World Book Co., 1920. Pp. xv+390. $1.60.

next; chemistry, geology, and certain forms of physical geography (weather, volcanoes, earthquakes, etc.) come third; biology, with physiology and hygiene, is a close fourth; and nature study, in the ordinary school sense of the term, comes in hardly at all [p. v].

The book is intended for an introductory course, and the aim throughout is the development of the science interests of the child, rather than the teaching of a logically organized body of scientific information. The method used is well adapted to this end. Each topic is introduced by a few of the questions which were included in the list gathered from the children. To illustrate, the topic of static electricity is opened with such questions as "What is electricity? What makes thunder and lightning? Why do sparks fly from the fur of a cat when you stroke it in the dark?" Following the questions is a simple paragraph, often in conversational style, to further arouse the interest of the child. The next step is the introduction of simple and interesting experiments which help to answer the introductory questions. These experiments do not require elaborate or expensive apparatus. The principle illustrated by the experiment is further clarified by discussion and the topic is closed with a series of inference exercises. Excellent illustrations and diagrams are freely used.

The book should be of value in conserving and developing the science interests of children of junior high-school age.

Recent revisions of texts in arithmetic, English, and history.—Superintendents and teachers will be interested in a number of well-known texts which now appear in revised form.

The arithmetic series by Hoyt and Peet[1] has been modified in the revision in two particular respects. The change in present prices and conditions has made it necessary to bring many of the examples up to date in this respect. A second change has been brought about by the recent development of scientific tests and drills. At frequent intervals, in the revised edition, there appear diagnostic tests for determining the specific weaknesses of pupils. Progress tests and scores are given at the end of each term's work to show how fully standards of advancement have been met.

In the field of English a set of texts has been revised by Hodge and Lee.[2] These books are based upon *Lessons in English* which was the successor of the "Reed and Kellogg" series. Book One, for grades four, five, and six, has been enlarged and contains some new material. Book Two, for grades seven and eight, has been re-written for the purpose of treating language work

[1] FRANKLIN S. HOYT and HARRIET E. PEET, *Everyday Arithmetic. Primary*, pp. viii+278, $0.72; *Intermediate*, pp. x+278, $0.76; *Advanced*, pp. x+326, $0.88. Boston: Houghton Mifflin Co., 1920 [revised].

[2] LAMONT F. HODGE and ARTHUR LEE, *Elementary English, Spoken and Written. Book One*, pp. 324; *Book Two*, pp. 464. New York: Charles E. Merrill Co., 1920 [revised].

more extensively, and to establish a closer correlation between the teaching of language and grammar. A great deal of attention is given to the development of oral expression, both as an aid to correct speech, and as a preparation for written composition.

Two new revisions of Montgomery's histories have appeared this year. The principal change in each case has been the addition of new material made necessary by the world-war. In the larger text,[1] fourteen pages have been added for this purpose; and in the elementary text[2] eighteen pages. Other changes have to do with the prohibition amendment, new inventions, and numerous minor items.

Geography texts.—For some time there has been developing a "regional" method of teaching geography. Up to the present, the use of this method has been hindered by the lack of a well-organized textbook of that kind. A new book by Professor Atwood,[3] constructed upon the basis of "natural regions," will doubtless do much to stimulate this type of teaching. The book possesses many other merits, among which should be mentioned the six hundred carefully chosen illustrations and the fifty-eight colored maps. The map scheme is very effective from the pedagogical standpoint, and the individual maps have been constructed with particular attention to their correlation with the accompanying text material. Book One of the series,[4] by Professor Frye, has been revised to show the changes brought about by the war, and a new chapter, entitled "The United States among the Nations," has been added.

Another geography, for supplementary use, has been written by Frank M. McMurry.[5] It is devoted entirely to the geography of the world-war and its effects, and furnishes a more intensive treatment than can be given in the regular textbook. It has sixty-seven illustrations and maps, and an appendix giving a condensed survey of war events. It will be useful supplementary material for classes in both geography and history.

Supplemental reading material.—The enthusiasm for the conservation of natural resources has been the stimulus for a new series of readers. The

[1] D. H. MONTGOMERY, *The Leading Facts of American History*. Boston: Ginn & Co., 1920 [revised edition]. Pp. xii+421+c. $1.40.

[2] D. H. MONTGOMERY, *The Beginner's American History*. Boston: Ginn & Co., 1920 [revised edition]. Pp. vi+297+xviii. $0.84.

[3] WALLACE W. ATWOOD, *New Geography, Book Two*. "Frye-Atwood Geographical Series." Boston: Ginn & Co., 1920. Pp. iv+304+xvi.

[4] ALEXIS E. FRYE, *New Geography, Book One*. "Frye-Atwood Geographical Series." Boston: Ginn & Co., 1920 [revised edition]. Pp. viii+264+viii.

[5] FRANK M. MCMURRY, *The Geography of the World War and the Peace Treaties*. New York: Macmillan Co., 1920. Pp. 64.

first number of this series has been published,[1] and the titles of some of the forthcoming issues have been announced. Mr. Fairbanks has attempted to provide material of a suitable nature for training in silent reading, and at the same time to supply a content which will function in developing an intelligent sentiment favorable to conservation. The thirty-one chapters of the book are given principally to the subjects of the soil, the forests, the underground resources, and the wild life of the country. The text is illustrated with a great number of artistic photographs. It is well adapted for use in the intermediate grades.

Supplementary material of a more elementary nature is found in a new book by W. E. Griffis.[2] The fairy tales of Switzerland are not familiar to the majority of school children. The folklore of this country has been gathered up and is here presented in a series of twenty-five attractive stories. Those who are acquainted with the Dutch, Belgian, and Welsh fairy tales by the same author will know what to anticipate from this book.

The same publishers have also issued a supplementary reader[3] for primary grades in which the adventures of the "Graymouse" family, and other members of the small wild life of the woods, are recounted. The story is told in a pleasing style which will be attractive to primary children.

Reading material of a somewhat different type has been prepared by a committee of the Philadelphia Yearly Meeting of Friends. This book[4] has for its purpose the teaching of moral and religious truth to children. Some of the stories are much better than others. If used with discrimination, the book will furnish some very good reading material.

School plays.—Teachers and dramatic directors frequently have difficulty in finding just the type of plays that they need. In order to aid in the selection of plays for children, attention should be called to a selected list prepared by Miss Oglebay[5] for the New York Drama League. The plays listed are for children from the ages of six to sixteen, and range from the simple type found in dramatic readers to those requiring larger casts and elaborate costumes and scenery. They are classified into eight divisions as follows: reference books, books about costumes and scenery, books of stories and poems for

[1] HAROLD W. FAIRBANKS, *Conservation Reader*. Yonkers-on-Hudson, New York: World Book Co., 1920. Pp. vi+216. $1.20.

[2] WILLIAM E. GRIFFIS, *Swiss Fairy Tales*. New York: Thomas Y. Crowell Co., 1920. Pp. 260.

[3] NELLIE M. LEONARD, *Uncle Squeaky's Country Store*. New York: Thomas Y. Crowell Co., 1920. Pp. 87.

[4] ANNA P. BROOMELL (chairman), *The Children's Story Garden*. Philadelphia: J. B. Lippincott Co., 1920. Pp. 246. $1.50.

[5] KATE OGLEBAY, *Plays for Children*. New York: H. W. Wilson Co., 1920. Pp. 19. $0.60.

story-playing and telling, dramatic readers, plays, books of plays, plays for Christmas, and plays for other holidays. With each title there is given a summary of the plot, and the number of characters, acts, scenes, and settings. It furnishes a convenient guide for the selection of dramatic material.

Education of the adolescent.—The educational problems of the seventh and eighth grades, as well as those of the high school, are treated in a recent book[1] by R. A. Mackie. The book opens with a chapter on "Education during Adolescence" in which the author summarizes the four specific aims of this period as physical well-being, vocational guidance, personal culture, and social efficiency. The next two chapters are devoted to the problems of the curriculum. Professor Mackie advocates a six-year course and a junior high school form of organization for this period of education. He discusses at length the principle of election in education, and outlines a curriculum for each of the six years illustrating his views of constants and electives. The last three chapters, which make up the greater part of the book, treat in detail the proposed required subjects, which are the social studies, English, and history. In the chapter on history the greater part of the discussion relates to the socialized recitation and to project methods of teaching.

The book is based upon the teachings of G. Stanley Hall, and copious quotations from his works are used throughout. The point of view will be familiar to those who have read Hall's *Adolescence* and *Educational Problems*.

English primer for foreign adults.—During the war the Chicago Association of Commerce organized a Committee on Americanization as a subcommittee of its War Council. Recognizing that the need of Americanization work was not limited to the period of the war, this committee has been made a permanent one. Under its direction, an English primer for foreign adults[2] has been prepared. The book has many merits and should prove very useful with evening and extension classes. The lesson subjects are graded from very simple ones in the first part of the book to more elaborate material at the end. The topics have been chosen with special reference to the everyday needs of the foreign adult, and include lessons on such subjects as schools, wages, money, banks, transportation, signals, and holidays. Each lesson has been prepared by expert teachers in actual classes of non-English-speaking adults, and its practical value has been demonstrated. The direct method of teaching has been used throughout. The book possesses content as well as formal value, and should serve to emphasize American customs and ideals.

[1] R. A. MACKIE, *Education during Adolescence.* New York: E. P. Dutton & Co., 1920. Pp. xv+222.

[2] FRANCES K. WETMORE, *A First Book in English for Non-English Speaking Adults.* Chicago Association of Commerce, 1920. Pp. 93. $1.10.

Drill exercises for arithmetic.—The interest in educational measurements has called out many kinds of standardized drill material. A set of arithmetic exercises[1] has now appeared which is published in two series, one for the lower and one for the upper grades. Series A contains eighty sets of examples, standardized for time and accuracy, including work in the four fundamental operations, decimals, and fractions. The time for the drill exercises varies from one-half to three minutes. Only one time standard is given with no modification for the different grades. The directions are printed at the top of each sheet. The pupil's directions for examples in "Fundamental Number Facts" are as follows: "The four possible numerical interpretations of any two of these numbers must be recognized at sight. With pencil write rapidly as many of the following computations as you can perform in one minute. Reverse the order of computation and compute again" (Series A, p. 1). It would be interesting to know just what the reaction of a child in the lower grades would be to such a vocabulary. The figures for all examples are printed in script, and the answers are given on the reverse side of each page. Series B contains sets of more complex problems for use in the upper grades.

CURRENT PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL METHOD, HISTORY, THEORY, AND PRACTICE

BURGESS, W. RANDOLPH. *Trends of School Costs.* New York: Russell Sage Foundation, 1920. Pp. 144. $1.00.

GRAHAM, EDWARD KIDDER. *Education and Citizenship.* New York: G. P. Putnam's Sons, 1919. Pp. xiv+253. $1.50.

HENDY, F. J. R. *The Universities and the Training of Teachers.* Oxford, England: Clarendon Press, 1920. Pp. 28.

HILL, DAVID SPENCE. *Introduction to Vocational Education.* New York: Macmillan Co., 1920. Pp. xvii+483.

MACKIE, R. A. *Education during Adolescence.* New York: E. P. Dutton & Co., 1920. Pp. xv+222.

National Intelligence Tests. Prepared under the auspices of the National Research Council. Yonkers-on-Hudson, New York: World Book Co., 1920. Scale A, Form 1: Scale B, Form 1 (with scoring keys, packages for 25 pupils). $1.60.

RAPEER, L. W. *The Consolidated Rural School.* New York: Charles Scribner's Sons, 1920. Pp. xiii+545.

RUSSELL, WM. F. *Schools in Siberia.* Philadelphia: J. B. Lippincott Co., 1919. Pp. 135.

[1] M. G. CLARK, *Arithmetic Habituated: Series A and Series B.* Chicago: Laurel Book Co., 1919.

SIMS, NEWELL LEROY. *The Rural Community: Ancient and Modern.* New York: Charles Scribner's Sons, 1920. Pp. xxiii+916.

STRAYER, GEORGE D., and ENGELHARDT, N. L. *The Classroom Teacher in American Schools.* New York: American Book Co., 1920. Pp. 400. $1.48.

WOOLBERT, CHARLES HENRY. *The Fundamentals of Speech.* New York: Harper & Brothers, 1920. Pp. 385. $2.25.

WRAY, W. J., and FERGUSON, R. W., editors. *A Day Continuation School at Work.* New York: Longmans, Green & Co., 1920. Pp. xii+212.

BOOKS PRIMARILY FOR ELEMENTARY-SCHOOL TEACHERS AND PUPILS

BALDWIN, JAMES. *The Story of Liberty.* New York: American Book Co., 1919. Pp. 240. $0.88.

BATES, ESTHER WILLARD. *A Pageant of Pilgrims.* Boston: The Pilgrim Press, 1920. Pp. xii+42.

BONSER, FREDERICK G. *The Elementary School Curriculum.* New York: Macmillan Co., 1920. Pp. xvi+466.

BRYANT, ALICE C. *A Treasury of Hero Tales.* New York: Thomas Y. Crowell Co., 1920. Pp. 128.

MONTGOMERY, D. H. *The Beginner's American History.* New York: Ginn & Co., 1920 [new edition]. Pp. vi+297+xviii.

PUBLICATIONS OF THE UNITED STATES BUREAU OF EDUCATION AND SIMILAR MATERIAL IN PAMPHLET FORM

Recent issues of the Bureau of Education:

Teacher's Leaflet No. 9. Lessons in Civics for the Three Primary Grades of City Schools.

MISCELLANEOUS PUBLICATIONS

DAVISON, HENRY P. *The American Red Cross in the Great War.* New York: Macmillan Co., 1920. Pp. 302. $2.00.

Proceedings of the International Conference of Women Physicians. New York: The Woman's Press, 1920. 6 vols. $3.00.

Roosevelt's Writings. Selections from the Writings of Theodore Roosevelt. Edited by MAURICE GARLAND FULTON. New York: Macmillan Co., 1920. Pp. xxxix+365.

SAUNDERS, ALTA GWINN, and CREEK, HERBERT LESOURD. *The Literature of Business.* New York: Harper & Brothers, 1920. Pp. xvi+513.

THORNDIKE, ASHLEY H. *Literature in a Changing Age.* New York: Macmillan Co., 1920. Pp. 318.